DOCUMENT RESUME

ED 450 678 HE 033 854

AUTHOR	Lee, John B.
TITLE	Undergraduates Enrolled with Higher Sticker Prices. Statistical Analysis Report. Postsecondary Education Descriptive Analysis Reports.
INSTITUTION	National Center for Education Statistics (ED), Washington, DC.; JBL Associates, Bethesda, MD.
REPORT NO	NCES-2001-171
PUB DATE	2001-03-00
NOTE	101p.
AVAILABLE FROM	ED Pubs, P.O. Box 1398, Jessup, MD 20794-1398. Tel: 877-433-7827 (Toll Free); Web site: http://www.ed.gov/pubs/edpubs.html.
PUB TYPE	Numerical/Quantitative Data (110) -- Reports - Research (143)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	*College Choice; Colleges; Higher Education; *Institutional Characteristics; Student Attitudes; *Student Costs; *Undergraduate Students
IDENTIFIERS	*Return on Investment

ABSTRACT

This study investigated the reasons full-time, first-year undergraduates gave for choosing to enroll at colleges with higher sticker prices, how they paid their expenses, and the educational experiences associated with attendance at these schools. It also reviews how satisfied they were with their choices, how they rated the educational experience, how they paid for the education, and their first-year persistence. Undergraduates from public colleges with sticker prices below $12,000 a year were used as comparisons, and a third group of undergraduates at public and private institutions with sticker prices below $12,000 was included in the tables of the report, but not in the analyses. The primary data sources was the National Postsecondary Student Aid Study (NPSAS:96). Almost all of the students at the higher sticker price schools were traditional in the sense of being single, younger than 24, or financially dependent on their parents. More of the undergraduates at these more expensive schools went to college out of state, and 92% lived on campus. Financial aid was received by 79% of the high sticker price students, in comparison with 69% of students at the lower cost public colleges. Four influences differentiated full-time first-year undergraduates from the higher sticker price schools: (1) the influence of institutional reputation; (2) receiving more financial aid; (3) influence of faculty reputation; and (4) the school's job placement rate. Students in both groups were generally satisfied with their social and extracurricular activities, and student satisfaction with academics was higher at the higher sticker price schools. Appendixes contain a glossary and technical notes. (Contains 18 tables, 6 figures, and 18 references.) (SLD)

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Statistical Analysis Report March 2001

Postsecondary Education Descriptive Analysis Reports

Undergraduates Enrolled With Higher Sticker Prices

U.S. DEPARTMENT OF EDUCATION
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JBL Associates, Inc.

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National Center for Education Statistics

U.S. Department of Education
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Suggested Citation

U.S. Department of Education, National Center for Education Statistics. *Undergraduates Enrolled With Higher Sticker Prices.* NCES 2001–171, by John Lee. Project Officer, C. Dennis Carroll. Washington, DC: 2001.

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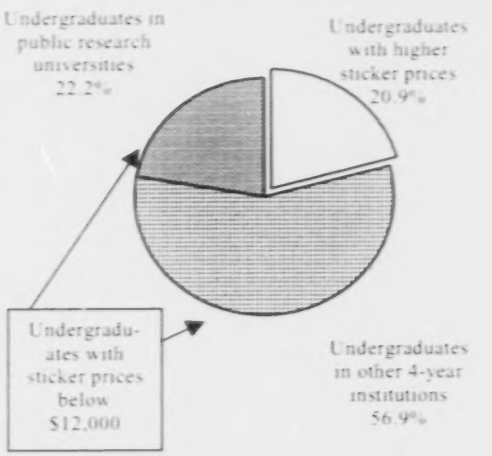
EXECUTIVE SUMMARY

This report investigates the reasons full-time, first-year undergraduates gave for choosing to enroll at higher sticker prices, how they paid their expenses, and the educational experiences associated with attendance. It also reviews how satisfied they were with their choice, how they rated their educational experience, how they paid for the education and their first-year persistence.

The tables provide data on full-time, first-year undergraduates with higher sticker prices. Comparisons are made with undergraduates attending public research universities with sticker prices below $12,000. Undergraduates in public research universities with sticker prices below $12,000 were chosen as a comparison because many of these students show signs of being able to enroll at higher sticker prices. A third group of undergraduates attended other 4-year public institutions and private institutions with sticker prices below $12,000. This third group is included in the tables, but not in the analysis.

Most of the institutions attended by undergraduates with higher sticker prices were private, not-for-profit, but some attended public institutions as out-of-state students. Twenty-one percent of all full-time, first-year undergraduates who attended 4-year institutions faced higher sticker prices (figure A).

Figure A–Percentage distribution of full-time, first-year undergraduates in 4-year institutions by sticker price and Carnegie classification: 1995-96


Undergraduates in public research universities 22.2%
Undergraduates with higher sticker prices 20.9%
Undergraduates with sticker prices below $12,000
Undergraduates in other 4-year institutions 56.9%

NOTE: The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

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Public research universities include Research I and II universities as defined in the Carnegie Classification system. Twenty-two percent of the full-time, first-year undergraduates that attended 4-year institutions enrolled in public research universities with sticker prices below $12,000. In many states, public research universities with sticker prices below $12,000 represent the most prestigious institutional choice available.

The primary source of data for this analysis was the National Postsecondary Student Aid Study (NPSAS:96). This data set provides a nationally representative sample of undergraduates enrolled in accredited postsecondary institutions. NPSAS:96 provides information about expenses and financial aid along with characteristics that distinguish undergraduates with higher sticker prices from those with sticker prices below $12,000 in public research universities.

In addition, the report provides information about student characteristics associated with full-time undergraduate persistence in the first year of enrollment. Persistence is defined as attending full-time at the same campus for at least eight months during the year.

STUDENT CHARACTERISTICS

Nearly all of the full-time, first-year undergraduates who faced higher sticker prices or sticker prices below $12,000 in public research universities can be classified as traditional. Characteristics of traditional students include being single, younger than 24, or financially dependent on their parents. Also, the family incomes of the undergraduates attending institutions in the two institutional groups did not differ statistically (table A).

The percent of full-time, first-year undergraduates attending college out-of-state, and the percent living on-campus differentiated those who enrolled with higher sticker prices from those enrolling with sticker prices below $12,000 in public research universities. Fifty-five percent of full-time, first-year undergraduates with higher sticker prices enrolled in institutions out-of-state compared with 19 percent of those with sticker prices below $12,000 in public research universities. Further, 92 percent of the full-time, first-year undergraduates with higher sticker prices lived on-campus compared with 74 percent of those with sticker prices below $12,000 in public research universities.

FINANCES

Financial aid, work and parental support are the three major sources of financial support for undergraduates in both groups. Financial aid was received by 79 percent of the full-time, first-year undergraduates with higher sticker prices compared with 69 percent of those with sticker prices below $12,000 in

Table A–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to selected student characteristics, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Marital status			
Not married	99.9	99.8	97.1
Married	0.1	0.2	2.6
Separated	#	#	0.3
Age			
23 or younger	99.7	99.0	95.2
24-30	0.2	0.6	3.1
31-39	0.1	0.2	1.2
40 or older	#	0.2	0.5
Dependency status			
Dependent	98.4	98.2	91.1
Independent	1.6	1.8	8.9
Income and dependency level			
Dependent			
Less than $20,000	9.6	14.0	17.7
$20,000-$39,999	15.9	17.4	22.6
$40,000-$59,999	21.5	22.1	21.2
$60,000-$79,999	18.9	17.1	14.8
$80,000 or more	32.5	27.6	14.8
Independent			
Less than $5,000	1.1	0.7	3.2
$5,000-$9,999	0.1	0.8	2.4
$10,000-$19,999	0.3	0.3	1.8
$20,000 or more	0.1	0.1	1.6
Student attended institution in state of legal residence			
Student attended institution in-state	44.8	80.8	81.1
Student attended institution out-of-state	55.2	19.2	18.9
Student housing status, 1995-96			
On-campus	92.4	73.6	55.7
Off-campus	2.2	14.4	15.3
With parents or relatives	5.4	12.0	29.0

Table A–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to selected student characteristics, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
First generation student			
Student was first generation	18.8	24.3	39.8
Student was not first generation	81.2	75.7	60.2

The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discount, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

#Estimate too small to report.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

public research universities (table B). Part of the difference can be accounted for by the difference in probability of receiving federally provided financial aid. Sixty-one percent of the full-time, first-year undergraduates with higher sticker prices received federal financial aid compared with 48 percent of those with sticker prices below $12,000 in public research universities.

Full-time, first-year undergraduates with higher sticker prices were more likely to have received grants, loans, or work-study than were those with sticker prices below $12,000 in public research universities. The most striking difference is noted for college work-study, which one-third of the full-time, first-year undergraduates with higher sticker prices received, compared with 7 percent of those with sticker prices below $12,000 in public research universities.

The majority of full-time, first-year undergraduates in both groups worked while they attended school. Full-time, first-year undergraduates with higher sticker prices were more likely to work one to 14 hours a week, and those with sticker prices below $12,000 in public research universities were more likely to work 15 hours or more per week. Thirty-seven percent of those with higher sticker prices worked between one and 14 hours per week during the school year compared with 18 percent of those with sticker prices below $12,000 in public research universities. One-quarter of the full-time, first-year undergradu-

Table B–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to type of aid and average hours worked while enrolled, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Total aid			
Did receive aid	78.5	68.6	75.2
Did not receive aid	21.5	31.4	24.8
Federal aid (except VA/DOD)[2]			
Did receive federal aid	60.8	48.0	59.2
Did not receive federal aid	39.2	52.0	40.8
Grant aid			
Did receive grant aid	72.1	53.3	61.4
Did not receive grant aid	27.9	46.7	38.6
Loan (except PLUS)[3]			
Did receive loan	58.2	41.6	45.7
Did not receive loan	41.8	58.4	54.3
Work-study			
Did receive work-study	32.9	6.5	11.4
Did not receive work-study	67.1	93.5	88.6
Average hours worked per week while enrolled			
Did not work	40.9	46.4	36.9
Worked 1-14 hours or less while enrolled	36.8	18.3	16.4
Worked 15-29 hours while enrolled	15.8	25.2	29.0
Worked 30 or more hours while enrolled	6.5	10.1	17.7
Parents helped with direct contribution			
Student did receive direct contribution from parent	91.9	79.6	70.8
Student did not receive direct contribution from parent	8.1	20.4	29.2

[1]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

[2]Veterans Administration/Department of Defense.

[3]PLUS loans are unsubsidized variable-interest rate loans awarded to parents of dependent students who are able to meet criteria for credit worthiness.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

ates with sticker prices below $12,000 in public research universities worked 15 to 29 hours compared with 16 percent of those with higher sticker prices. Ten percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public re-

search universities worked 30 hours or more compared with 7 percent of those with higher sticker prices.

Parents also provided financial support. Ninety-two percent of the full-time, first-year undergraduates with higher sticker prices received parental help compared with 80 percent of those with sticker prices below $12,000 in public research universities.

INFLUENCES

Four influences differentiated full-time, first-year undergraduates with higher sticker prices from those with sticker prices below $12,000 in public research universities (table C). First, one-half of the full-time, first-year undergraduates with higher sticker prices indicated that institutional reputation was a reason for enrolling compared with 41 percent of those with sticker prices below $12,000 in public research universities. The second factor was receiving more financial aid. Twelve percent of the full-time, first-year undergraduates with higher sticker prices indicated that the receipt of more financial aid was a reason for enrolling compared with 6 percent of those with sticker prices below $12,000 in public research universities. Third, faculty reputation was identified as an influence by 7 percent of the full-time, first-year undergraduates with higher sticker prices compared with 2 percent of those with sticker prices below $12,000 in public research universities. The fourth influence was the job placement rate. Five percent of the full-time, first-year undergraduates with higher sticker prices said job placement was an important consideration compared with 1 percent of those with sticker prices below $12,000 in public research universities.

Four influences differentiated full-time, first-year undergraduates with sticker prices below $12,000 in public research universities from those with higher sticker prices. First, 31 percent of full-time, first-year undergraduates with sticker prices below $12,000 in public research universities indicated that being close to home was an important influence compared with 17 percent of those with higher sticker prices. The second factor was low tuition. Ten percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities indicated that low tuition was important compared with 1 percent of those with higher sticker prices. Third, 8 percent of those with sticker prices below $12,000 in public research universities indi-

Table C–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to selected undergraduates' reasons for attendance, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Institution has good reputation			
Institution reputation was a reason for attendance	50.4	41.1	28.4
Institution reputation was not a reason for attendance	49.6	58.9	71.6
Received more financial aid			
Received more financial aid was a reason for attendance	12.3	5.5	6.4
Received more financial aid was not a reason for attendance	87.7	94.5	93.6
Faculty reputation			
Faculty reputation was a reason for attendance	7.0	2.2	3.9
Faculty reputation was not a reason for attendance	93.0	97.8	96.1
Institution job placement rate			
Job placement rate was a reason for attendance	4.6	1.2	2.2
Job placement rate was not a reason for attendance	95.4	98.8	97.8
Institution close to home			
Institution close to home was a reason for attendance	17.4	30.8	36.3
Institution close to home was not a reason for attendance	82.6	69.2	63.7
Low tuition[2]			
Low tuition was a reason for attendance	0.8	9.8	5.4
Low tuition was not a reason for attendance	99.2	90.2	94.6
Friends or spouse attend institution			
Friends or spouse attending was a reason for attendance	3.3	7.5	7.0
Friends or spouse attending was not a reason for attendance	96.7	92.5	93.0
Could live at home if attended			
Could live at home was a reason for attendance	1.8	4.5	6.0
Could live at home was not a reason for attendance	98.2	95.5	94.0

[1]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

[2]"Low" as interpreted by the respondent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

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cated that friends or a spouse attending the school influenced their decision to enroll compared with 3 percent of those with higher sticker prices. The fourth factor was the option to live at home, which was a reason given by 5 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities compared with 2 percent of those with higher sticker prices.

ACADEMIC DIFFERENCES

One measure of academic preparation, having SAT scores of 1,300 or more, differentiated full-time, first-year undergraduates with higher sticker prices from those with sticker prices below $12,000 in public research universities. Seventeen percent of the full-time, first-year undergraduates with higher sticker prices achieved SATs of 1,300 or more compared with 10 percent of those with sticker prices below $12,000 in public research universities. Another difference noted was the distribution of undergraduates by their undergraduate grade point averages (GPA). Eighteen percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities achieved a 2.00 or lower compared with 9 percent of those with higher sticker prices. Two other measures of academic preparation, the percentage of full-time, first-year undergraduates taking advanced placement tests or taking remedial classes, were not significantly different between the two groups (table D).

The mix of academic majors chosen by full-time, first-year undergraduates differed between the two undergraduate categories. Forty-two percent of the full-time, first-year undergraduates with higher sticker prices majored in humanities, social, behavioral and life sciences compared with 32 percent of those with sticker prices below $12,000 in public research universities. Twenty-one percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities majored in physical sciences, engineering, computer sciences or mathematics compared with 13 percent of those with higher sticker prices.

Full-time, first-year undergraduates with higher sticker prices were also more likely to report that they often had social contact with the faculty than were those with sticker prices below $12,000 in public research universities.

SATISFACTION

Nearly all full-time, first-year undergraduates in both groups were satisfied with the social and extracurricular activities and the sports and recreation programs on their campus. Satisfaction with the academic experience was higher for full-time, first-year

Table D–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to selected undergraduates' academic differences, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Scholastic Aptitude Test (SAT) score, combined verbal and mathematics			
Less than 1,000	33.0	40.4	73.5
1,000-1,299	50.3	50.1	23.5
1,300-1,600	16.7	9.5	3.0
Grade point average			
Less than 2.00	9.1	17.6	24.9
2.00-3.49	67.6	60.7	62.0
3.50 or higher	23.2	21.7	13.2
Number of Advanced Placement (AP) tests taken			
Student took one or more placement tests	48.0	44.2	18.6
Student took no placement test	52.0	55.8	81.4
Remedial courses			
Did take remedial courses	6.8	9.8	20.8
Did not take remedial courses	93.2	90.2	79.2
Undergraduate field of study			
Humanities, social, behavioral, life sciences	42.2	32.3	33.3
Physical sciences, engineering, computer science, mathematics	12.7	21.1	15.6
Education	7.3	6.4	11.6
Business, management	17.9	15.6	18.5
Health, other	19.8	24.7	21.1
Have social contact with faculty			
Never	33.9	50.1	44.9
Sometimes	49.9	42.2	42.3
Often	16.2	7.7	12.8

*The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

undergraduates with higher sticker prices than it was for those with sticker prices below $12,000 in public research universities. The three academic characteristics that full-time, first-year undergraduates with higher sticker prices were more likely to report as satisfactory than were those with sticker prices below $12,000 in public research universities included availability of courses, instructors' ability and class size (table E). Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were more likely to be satisfied with social life and the sports and recreation programs on-campus (94 and 96 percent, respectively) than were those with higher sticker prices (90 and 92 percent, respectively).

Table E—Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to selected undergraduates' satisfaction characteristics, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Course availability			
Satisfied with course availability	83.2	70.2	75.4
Not satisfied with course availability	16.8	29.8	24.6
Instructors' ability to teach			
Satisfied with instructors' ability to teach	95.2	86.9	88.1
Not satisfied with instructors' ability to teach	4.8	13.1	11.9
Class size			
Satisfied with class size	96.6	78.0	93.5
Not satisfied with class size	3.4	22.0	6.5
Social life			
Satisfied with social life	89.9	93.6	90.4
Not satisfied with social life	10.1	6.4	9.6
Sports and recreational activities[2]			
Satisfied with sports and recreational activities	91.7	96.4	92.7
Not satisfied with sports and recreational activities	8.3	3.6	7.3

[1]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."
[2]Includes only respondents who participated in sports and recreational activities.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

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PERSISTENCE

Multivariate analysis techniques were used to find that full-time, first-year undergraduates with higher sticker prices were more likely to persist in their first year than were those with sticker prices below $12,000 in public research universities. Further, the multivariate statistical techniques found that student characteristics did not explain the difference in persistence. Persistence is defined as attending full-time at the same campus for at least eight months during the year.

CONCLUSIONS

Undergraduates attending institutions with sticker prices of $12,000 or more and those with sticker prices below $12,000 in public research universities include a higher proportion of younger and academically prepared undergraduates. Differences in family incomes of full-time, first-year undergraduates in the two groups were not significantly different.

Full-time, first-year undergraduates in the two groups had different reasons for attending. For example, a larger percentage of full-time, first-year undergraduates with higher sticker prices indicated factors such as institutional reputation, financial aid, and job placement as reasons for attending compared with those with sticker prices below $12,000 in public research universities.

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FOREWORD

This report examines the differences between undergraduates who attended postsecondary institutions by the sticker price levels they faced. Specifically, the tables present information describing personal characteristics, academic preparation, financial aspects of attending a postsecondary institution, expectation, satisfaction and persistence. The analysis examines the relationship between these variables and higher sticker prices, sticker prices below $12,000 in public research universities, or sticker prices below $12,000 in other 4-year institutions for new college entrants.

The report uses data from the 1995-96 National Postsecondary Student Aid Study (NPSAS:96). NPSAS:96 is the fourth in a series of surveys conducted by the U.S. Department of Education. NPSAS:96 represents students of all ages and backgrounds at all types of postsecondary institutions (from less-than-2-year institutions that provide short-term vocational training to 4-year colleges and universities) who were enrolled during the 1995-96 academic year. The NPSAS surveys provide information about the price of postsecondary education and how students pay those prices.

The estimates presented in this report were produced using the NPSAS:96 Data Analysis System (DAS). The DAS is a microcomputer application that allows users to specify and generate their own tables from the NPSAS data. It produces the design-adjusted standard errors that are necessary for testing the statistical significance of differences shown in the tables. For more information regarding the DAS, readers should consult appendix B of this report.

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ACKNOWLEDGMENTS

Writing these reports is very much a team effort. Thanks go to all that helped during the various phases of developing this report. Suzanne Clery, Barry Christopher and Monika Hibbert-Flagg of JBL Associates produced and formatted tables, checked statistical statements and edited text. Laura Horn of MPR Associates, as always, had good ideas that helped shape the issues, and provided diligent technical support. Dennis Carroll of NCES provided the guidance and recommendations that come from many years of experience. Final reviews were provided by Paula Knepper and Roslyn Korb of NCES. In addition, the adjudication reviews helped improve the report. Special thanks to Carol Fuller, Assistant Vice President for Research and Policy Analysis, National Association for Independent Colleges and Universities, and Bruce Taylor and Dawn Nelson of NCES for their careful and thoughtful suggestions.

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INTRODUCTION

American postsecondary institutions provide diverse educational opportunities and experiences to undergraduates. Examples of the institutional attributes that can vary include educational mission, enrollment size, control and price of attendance. At a more personal level, colleges present diverse mixes of academic, social, and prestige qualities. These differences represent important educational options that are available to entering undergraduates. Price is an important part of the mix, but does not necessarily correlate with other attributes that may be important to undergraduates. Realizing these limitations, this report describes the reasons given by entering full-time undergraduates for choosing higher sticker prices, how they paid their expenses, the educational experiences associated with attendance, and persistence in the first year, and compares them with those with sticker prices below $12,000 in public research universities.

Sticker price is the published tuition and fees. This is the price prior to any financial aid awards, tuition remission or discounts being taken. According to the College Board (1998), the average sticker price for an undergraduate attending a public 4-year institution in 1998-99 was $3,243 compared with an average of $14,508 for an undergraduate attending a private, not-for-profit, 4-year institution.[1] At the high end, about 20 percent of the undergraduates attending private, not-for-profit, 4-year institutions faced sticker prices of $20,000 or more. However, less than 4 percent of **all** undergraduates had sticker prices of $20,000 or more.

The relative difference in the sticker price among institutions is a factor in student choice, especially for lower-income undergraduates. The consensus among researchers is that the sticker price affects enrollment. Researchers found increases in tuition or declines in student aid lead to enrollment declines. Lower-income undergraduates are more sensitive to changes in tuition and aid than are undergraduates who are from middle- and upper-income families. In addition to being an important consideration for undergraduates, the price of attendance, which includes tuition and fees and living and incidental costs, is related to the award of student financial aid (e.g.,

[1] An analysis of IPEDS 1995-96 Institutional Characteristics datafile showed the average sticker price for an undergraduate attending a public 4-year institution in 1995-96 was $2,808 compared with an average of $9,433 for an undergraduate attending a private, not-for-profit, 4-year institution.

Heller, 1997). Undergraduates who face higher sticker prices may receive more financial aid than they would if they attended lower-priced institutions.

The College Board (1999) reported that the ratio of price of attendance to the family income has increased from 37 percent to 44 percent over the last decade for a middle-income family sending a child to a private, not-for-profit institution. Public concern about the affordability of higher education was reflected *in Straight Talk About College Costs and Prices*, which was the report of the National Commission on the Cost of Higher Education (January 1998). The Commission was concerned that unless academic institutions solved the problem of increasing tuition, policy makers at both the state and federal levels might impose unilateral solutions that are likely to be heavy-handed and regulatory. This concern about price of attendance is one of the reasons for analyzing who enrolls in institutions with higher sticker prices.

Although the financial effort required to attend a private, not-for-profit, postsecondary institution[2] has increased, enrollment has kept pace. According to NCES data (1999), 21.8 percent of students enrolled in private, not-for-profit institutions in 1980, 21.5 percent in 1990, and 22.4 percent in 1995. Thus, the historical results suggest that many students and their families continue to be willing to consider a sticker price that represents an increasing share of their income. It may be that student aid has offset some of this increase.

DATA AND VARIABLE DEFINITIONS

The primary source of data for this analysis was the National Postsecondary Student Aid Study (NPSAS:96). This data set provides a nationally representative sample of full-time, first-year undergraduates enrolled in accredited postsecondary institutions. In the NPSAS:96, first-year undergraduates were asked a series of questions about their reasons for choosing their institutions and evaluations of their postsecondary experiences.

NPSAS:96 data are used to analyze first-year persistence of undergraduates who started their education in different types of institutions. In this report, persistence is defined as attending full-time for at least eight months at the same institution during 1995-96. A non-persisting student is one who left the institution, or enrolled less than full-time in the same institution during the year

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[2]Not all private, not-for-profit institutions qualify as having higher sticker prices.

The population was limited to undergraduates who attended full-time in September of 1995. Defining the population this way provides assurance that every undergraduate in the sample could have received student aid if they had applied and were eligible.

DEFINITION OF STICKER PRICE GROUPS

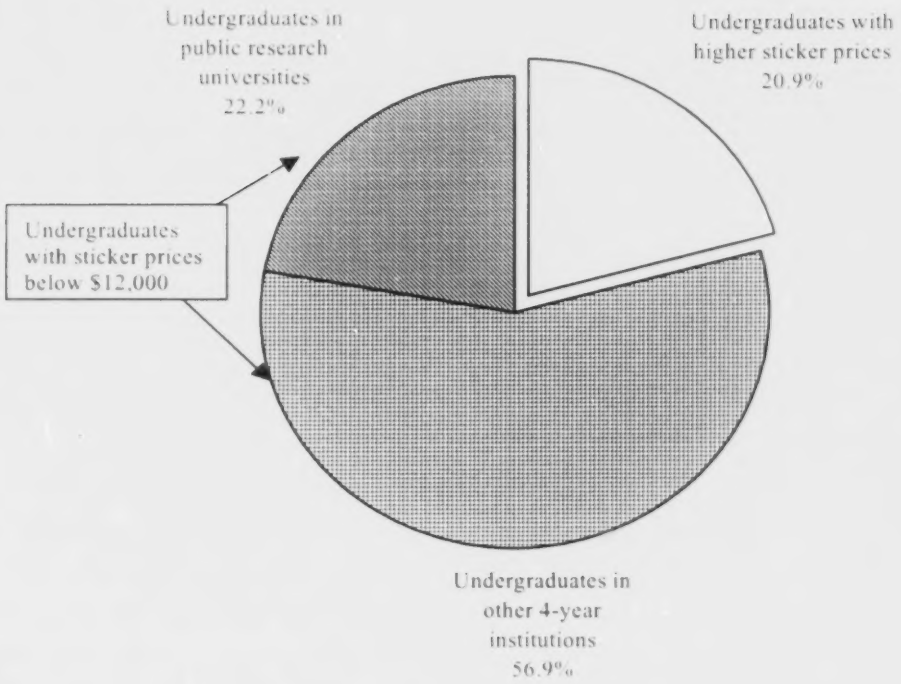
Given the complex institutional attributes that students may consider when choosing an institution, the price of attendance represents an important consideration. The price of attendance includes tuition and fees (sticker price) and other living costs associated with attending a post-secondary institution. Sticker price can vary more across institutions than the estimated living expenses that comprise the price of attendance. Reported student living costs may not be the actual costs because they are estimated. These are the reasons sticker price before remissions or discounts has been used to define undergraduates with higher sticker prices in the tables used in this report.

Full-time, first-year undergraduates who attended 4-year institutions were divided into three groups: those with higher sticker prices ($12,000[3] or more, with an average of $16,293 in table 5), those with sticker prices below $12,000 in public research universities (average tuition of $4,054), and those with sticker prices below $12,000 in other 4-year institutions. The latter group included all full-time, first-year undergraduates that were left after accounting for the previous two categories (average tuition of $4,192).

In some cases, full-time first-year undergraduates attending the same institution may have sticker prices above and below $12,000. An example would be a student attending a public research university as an out-of-state student with a sticker price in excess of $12,000, while a student attending the same institution in-state would be classified as having a sticker price below $12,000 in a public research university. Twenty-one percent of all full-time, first-year undergraduates who attended 4-year institutions in the NPSAS:96 sample faced sticker prices of $12,000 or more (figure 1).

[3] A $12,000 sticker price in 1995-96 is approximately comparable to $18,500 in 1998-99.

Figure 1–Percentage distribution of full-time, first-year undergraduates in 4-year institutions by sticker price and Carnegie classification: 1995-96

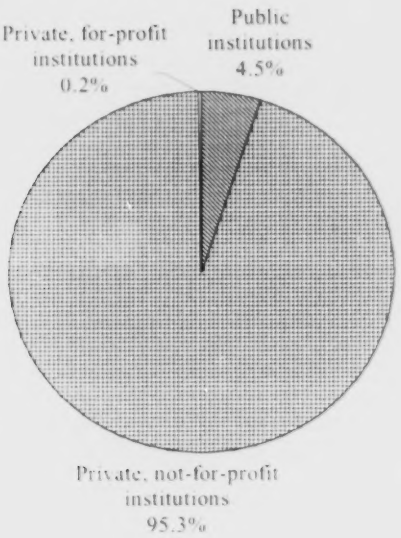

Undergraduates in public research universities 22.2%
Undergraduates with higher sticker prices 20.9%
Undergraduates with sticker prices below $12,000
Undergraduates in other 4-year institutions 56.9%

NOTE: The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

Most undergraduates with higher sticker prices attended institutions with private, not-for-profit tax status. Full-time, first-year undergraduates enrolled in private not-for-profit institutions comprise 95 percent of this group; 5 percent enrolled in public institutions (figure 2). Seventy-three percent of that 5 percent with sticker prices above $12,000 were in public research universities out-of-state. These full-time, first-year undergraduates probably faced out-of-state

Figure 2–Percentage distribution of full-time, first-year undergraduates with sticker prices of $12,000 or more by institutional control: 1995-96



NOTE: "Undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

tuition to attend these public institutions. A list of public 4-year institutions with out-of-state sticker prices of $12,000 or more in 1995-96 can be found in table 1.

Figure 3 shows that 26 percent of the full-time, first-year undergraduates with higher sticker prices enrolled in research universities, 10 percent were in doctoral institutions, 20 percent were in comprehensive institutions, 40 percent were in baccalaureate institutions, and the remaining 5 percent attended other types of institutions.

Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were used as the comparison group. Twenty-two percent of the full-time, first-year

Table 1—Public 4-year institutions with out-of-state sticker prices of $12,000 or more for full-time undergraduates: 1995-96

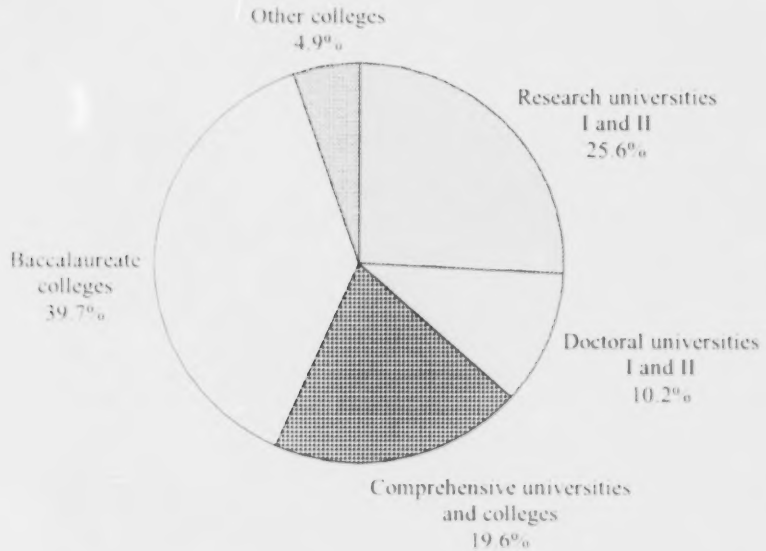
	State	Sticker price
Institution		
University of California-Berkeley	CA	$12,053
Colorado School of Mines	CO	13,326
University of Colorado at Boulder	CO	13,838
University of Colorado Health Sciences Center	CO	14,938
University of Connecticut	CT	12,800
University of Michigan-Ann Arbor	MI	17,671
University of New Hampshire-Main Campus	NH	13,711
Cornell University-NY State Statutory Colleges	NY	16,526
University of Rhode Island	RI	12,096
University of Vermont and State Agricultural College	VT	16,578
College of William and Mary	VA	14,428
University of Virginia-Main Campus	VA	14,010
Virginia Military Institute	VA	12,040

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Data Analysis System Institutional Characteristics datafile, 1995-96.

undergraduates who attended 4-year institutions enrolled with sticker prices below $12,000 in public research universities. The decision to use public research universities with sticker prices below $12,000 as the comparison group was based on two premises. First, in many states a public research university represents the most prestigious public institutional choice available. Second, attendance at a public research university is generally related to parents' incomes, as is attendance at private, not-for-profit institutions (McPherson and Schapiro, 1998, p. 45). This similarity between the incomes of undergraduates attending major research universities and private, not-for-profit institutions was also reported in the *Washington Post* (Cooper, 1999). Many undergraduates who attended these institutions could attend institutions with higher tuition. Public research universities include Research Universities I or II according to the Carnegie Classification system.[4] Even though these institutions share the same Carnegie Classification, they differ on other characteristics including student selectivity (Barrons, 1994).

[4]Institutions in this category award at least 50 graduate degrees annually and receive at least $15.5 million in external research funds annually.

Figure 3–Percentage distribution of full-time, first-year undergraduates with sticker prices of $12,000 or more by Carnegie classification: 1995-96

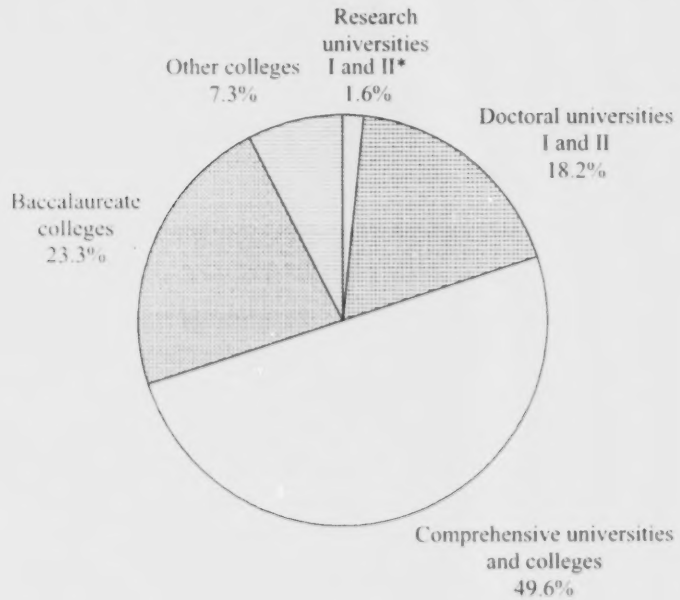


NOTE: "Undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

The third group included in the tables is called undergraduates with sticker prices below $12,000 in other 4-year institutions. This group includes all full-time, first-year undergraduates who did not attend institutions in either of the other two groups. Overall, 57 percent of full-time, first-year undergraduates were those with sticker prices below $12,000 in other 4-year institutions. One-half of the full-time, first-year undergraduates with sticker prices below $12,000 in the other 4-year institutions group attended comprehensive universities and colleges. The next largest group, 23 percent, attended baccalaureate colleges followed by 18 percent that attended doctoral universities (figure 4). Most of the full-time, first-year undergraduates with sticker prices below $12,000 in other 4-year institutions attended public institutions (69 percent), and 29 percent attended private, not-for-profit institutions (figure 5). Even though the information describing first-time, first-year undergraduates with sticker prices below $12,000 in other 4-year institutions is included in the tables, it is not discussed further in the text.

Figure 4–Percentage distribution of full-time, first-year undergraduates with sticker prices below $12,000 in other 4-year institutions by Carnegie classification: 1995-96


Research universities I and II* 1.6%
Other colleges 7.3%
Doctoral universities I and II 18.2%
Baccalaureate colleges 23.3%
Comprehensive universities and colleges 49.6%

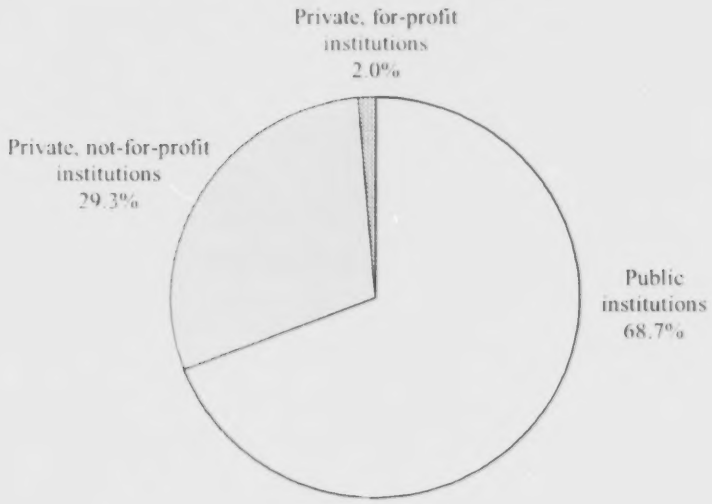
*These are private research I and II universities.

NOTE: Undergraduates in other 4-year institutions with sticker prices below $12,000 are those who faced sticker prices below $12,000 in the 1995-96 academic year and attended institutions other than public universities with Carnegie classification of Research I or II.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

As a comparison to the results reported using NPSAS data, table 2 provides a summary of the number of institutions, and the number of full-time, first-year undergraduates attending institutions in each of the groups, as reported in Integrated Postsecondary Education Data System (IPEDS). The undergraduate tuition reported in table 2 includes only in-state tuition. The NPSAS:96 data includes the higher out-of-state tuition that public university undergraduates, who are residents of a state other than the one in which the institution is located, may be charged. For this reason, the distribution of undergraduates by the published institutional sticker price reported to IPEDS may differ from the distribution reported using NPSAS data.

Figure 5–Percentage distribution of full-time, first-year undergraduates with sticker prices below $12,000 in other 4-year institutions by institutional control: 1995-96



NOTE: Undergraduates in other 4-year institutions with sticker prices below $12,000 are those who faced sticker prices below $12,000 in the 1995-96 academic year and attended institutions other than public universities with Carnegie classification of Research I or II.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

Table 2—Number of 4-year institutions and enrollment distribution of full-time, first-year undergraduates by sticker price reported on the Integrated Postsecondary Education Data System's Institutional Characteristics datafile, and Carnegie classification: 1995

	Number of 4-year institutions	Enrollment
Total	2,829	1,363,795
Sticker price reported on IPEDS and Carnegie classification		
Higher sticker prices*	418	206,359
Public research universities with in-state sticker prices below $12,000	85	260,058
Other 4-year institutions with sticker prices below $12,000	2,326	897,378

*In-state sticker price was used here; out-of-state sticker price was not. This definition resulted in the inclusion of only private, not-for-profit 4-year institutions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, Institutional Characteristics and Enrollment datafiles, 1995.

UNDERGRADUATE CHARACTERISTICS

Ninety-five percent of the full-time, first-year undergraduates with higher sticker prices enrolled in private, not-for-profit institutions (figure 2) and, by definition, all the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were in public institutions. This comparison was chosen because it is assumed that the two groups of undergraduates will have many similar attributes. This analysis is not the same as contrasting and comparing undergraduates in public and private, not-for-profit institutions. Not all not-for-profit institutions have sticker prices of $12,000 or more. Twenty-nine percent of the full-time, first-year undergraduates enrolled in other 4-year institutions with sticker prices below $12,000 attended private, not-for-profit institutions (figure 5).

Because 95 percent of full-time, full-year undergraduates with higher sticker prices enrolled in private, not-for-profit institutions (figure 2), examining the differences between undergraduates in private and public 4-year institutions found in previous research helps develop a list of characteristics that might typify full-time, first-year undergraduates with higher sticker prices. Horn and Berktold (1998) found that, on average, full-time, first-year undergraduates enrolled in private, not-for-profit and public 4-year institutions differ in several ways:

- Undergraduates in private, not-for-profit institutions were younger, on average, than those in public 4-year institutions.
- Undergraduates in private, not-for-profit institutions were more likely to be dependent on their parents for financial support than those in public 4-year institutions.
- Undergraduates in private, not-for-profit institutions were more likely to live on-campus than those in public 4-year institutions.
- Undergraduates in private, not-for-profit institutions were more likely to attend full-time than those in public 4-year institutions.

- Undergraduates in private, not-for-profit institutions were more likely to consider the graduation rate and the crime rate when choosing a school than those who attended public 4-year institutions.

Limiting the comparison to full-time, first-year undergraduates with higher sticker prices and those with sticker prices below $12,000 in public research universities will refine these comparisons. The following questions structured the analysis.

1. Did full-time, first-year undergraduates with higher sticker prices differ in their backgrounds or demographic characteristics from those with sticker prices below $12,000 in public research universities? For example, did a larger percentage of higher-income full-time, first-year undergraduates face higher sticker prices than sticker prices below $12,000 in public research universities?

2. How did the percentage of full-time, first-year undergraduates who attended institutions in one of the two groups differ in their readiness to participate in their post-secondary education? This set of comparisons will include measures of academic grades, test scores, and participation in school and community activities.

3. Did the percentage of full-time, first-year undergraduates in the two groups differ in attitudes, goals and aspirations? Examples of measures that will be included are the anticipated final degree and long-term life goals.

4. What percentage of full-time, first-year undergraduates in the two institutional categories received financial aid, support from parents and income from their own work?

5. Did the educational experience differ among the full-time, first-year undergraduates who attended institutions in each of the two groups? This set of indicators will include measures of first-year persistence. It will also show the percentage of full-time, first-year undergraduates enrolled in different academic majors and the percentage indicating satisfaction with different aspects of their educational experience.

Nearly all the full-time, first-year undergraduates with higher sticker prices or those with sticker prices below $12,000 in public research universities can be classified as traditional. Characteristics of traditional students include being single, younger than 24, and financially dependent on parents. Table 3 shows that almost all of the full-time, first-year undergraduates with

higher sticker prices or those with sticker prices below $12,000 in public research universities were not married, were 23 years of age or younger, and were dependent on their parents. Finally, the percentage of dependent full-time, first-year undergraduates attending institutions in the two groups did not differ statistically by family income categories.

The majority of both groups were not first-generation students. Eighty-one percent of the full-time, first-year undergraduates with higher sticker prices had parents with college experience, as did 76 percent of those with sticker prices below $12,000 in public research universities, which was not statistically different.

Horn and Premo (1996, p. 20) developed a risk index that has proven to be a good predictor of student persistence. The index includes the following student characteristics as risk factors associated with dropping out: being older than the typical age for year in school, being financially independent, having dependents, working full-time while enrolled, being a single parent, having a General Education Development (GED) certificate or high school equivalency certificate instead of a diploma, and enrolling part-time.

The percentage of full-time, first-year undergraduates with no risk factors was not significantly different between the two groups. Over four-fifths of the full-time, first-year undergraduates in both groups had none of the risk factors that predict dropping out of school. One risk factor, attending part-time, is excluded by definition of the population. Two of the risk factors, age and dependency, were reported earlier in this section. Ninety-nine percent of the full-time, first-year undergraduates in both categories had high school diplomas. One percent of the full-time, first-year undergraduates attending institutions in each of the groups were independents with dependents. Only one of the risk factors was statistically significant. Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were more likely to work full-time (more than 30 hours per week while in school) than were those with higher sticker prices, 10 percent compared with 7 percent (table 4).

Being black, non-Hispanic was the only racial/ethnicity category for which there was a statistically significant difference between the two groups of full-time, first-year undergraduates. Three percent of the full-time, first-year undergraduates with higher sticker prices were black, non-Hispanic compared with 7 percent of those with sticker prices below $12,000 in public research universities.

Some measures characterized the average full-time, first-year undergraduates who enrolled with higher sticker prices that were less likely to apply to those enrolling with sticker prices below $12,000 in public research universities. For example, 55 percent of full-time, first-year undergraduates with higher sticker prices enrolled in institutions out-of-state compared with 19 percent of those with sticker prices below $12,000 in public research universities.

Full-time, first-year undergraduates with higher sticker prices were more likely to live on-campus than were those with sticker prices below $12,000 in public research universities. Ninety-two percent of the full-time, first-year undergraduates with higher sticker prices lived on-campus compared with 74 percent of those with sticker prices below $12,000 in public research universities. Fourteen percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities lived off-campus compared with 2 percent of those with higher sticker prices and 12 percent lived with parents or relatives compared with 5 percent of those with higher sticker prices.

By these measures, undergraduates with higher sticker prices and those with sticker prices below $12,000 in public research universities were comparable on several key demographic and family characteristics. The results suggest that these two groups of undergraduates were more similar than they were different. Later sections expand the comparison of full-time, first-year undergraduates by academic attributes.

Table 3–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduate characteristics, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Marital status			
Not married	99.9	99.8	97.1
Married	0.1	0.2	2.6
Separated	#	#	0.3
Age			
23 or younger	99.7	99.0	95.2
24-30	0.2	0.6	3.1
31-39	0.1	0.2	1.2
40 or older	#	0.2	0.5

Table 3–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduate characteristics, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Dependency status			
Dependent	98.4	98.2	91.1
Independent	1.6	1.8	8.9
Income and dependency level			
Dependent			
Less than $20,000	9.6	14.0	17.7
$20,000-$39,999	15.9	17.4	22.6
$40,000-$59,999	21.5	22.1	21.2
$60,000-$79,999	18.9	17.1	14.8
$80,000 or more	32.5	27.6	14.8
Independent			
Less than $5,000	1.1	0.7	3.2
$5,000-$9,999	0.1	0.8	2.4
$10,000-$19,999	0.3	0.3	1.8
$20,000 or more	0.1	0.1	1.6
First generation student			
Student was first generation	18.8	24.3	39.8
Student was not first generation	81.2	75.7	60.2
Number of risk factors			
No risk factors	88.1	83.8	71.9
One to three risk factors	11.4	15.7	25.3
Four or more risk factors	0.5	0.5	2.8
High school degree or equivalent			
High school diploma	99.5	99.1	96.6
GED or other equivalent	0.4	0.4	2.7
Certificate of high school completion	0.1	0.4	0.5
No high school degree or certificate	#	0.1	0.2
Number of dependents, independent student			
Student had one or more dependents	0.7	0.6	4.4
Student had no dependents	99.3	99.4	95.6
Average hours worked per week while enrolled			
Did not work	40.9	46.4	36.9
Worked 1-14 hours while enrolled	36.8	18.3	16.4
Worked 15-29 hours while enrolled	15.8	25.2	29.0
Worked 30 or more hours while enrolled	6.5	10.1	17.7

Table 3–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduate characteristics, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Race ethnicity			
White, non-Hispanic	80.3	72.4	68.1
Black, non-Hispanic	3.4	7.2	14.3
Hispanic	4.3	7.1	12.1
Asian/Pacific Islander	9.5	11.4	4.7
American Indian/Alaskan Native	0.3	0.7	0.5
Other	2.2	1.2	0.3
Student attended institution in state of legal residence			
Student attended institution in-state	44.8	80.8	81.1
Student attended institution out-of-state	55.2	19.2	18.9
Student housing status, 1995-96			
On-campus	92.4	73.6	55.7
Off-campus	2.2	14.4	15.3
With parents or relatives	5.4	12.0	29.0
Gender			
Male	42.6	47.4	45.1
Female	57.4	52.6	54.9
Single parent, independent student			
Student was a single parent	0.6	0.5	2.4
Student was not a single parent	99.4	99.5	97.6
Income percentile rank, 1994 (all students)			
25th or less	14.3	19.3	28.5
26th - 50th	20.7	19.9	25.5
51st - 75th	25.4	25.4	26.0
76th - 100th	39.5	35.4	20.0
Degree program			
Certificate degree	3.4	2.4	1.4
Associate's degree	3.0	0.8	9.1
Bachelor's degree	93.6	96.4	89.0
Undergraduate, non-degree program	0.1	0.5	0.5

Table 3–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduate characteristics, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Delayed enrollment			
Did delay enrollment	6.9	8.1	17.5
Did not delay enrollment	93.1	91.9	82.5

*The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

#Estimate too small to report.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

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UNDERGRADUATE FINANCES

Financial aid is an important part of the postsecondary finance picture. Other contributions to student support include student work and parental contribution, which are reported after the section on student financial aid. Table 4 provides detailed information on the relationship between financial aid and enrollment in an institution in the two categories of interest.

STUDENT FINANCIAL AID

Seventy-nine percent of the full-time, first-year undergraduates with higher sticker prices received student financial aid, compared with 69 percent of those with sticker prices below $12,000 in public research universities. Federal, state, institutional and employer aid were the aid sources analyzed in this report.

Full-time, first-year undergraduates with higher sticker prices were more likely to receive federal financial aid, institutional aid or employer aid than were those with sticker prices below $12,000 in public research universities. Only the percentage receiving state-provided financial aid was not significantly different between full-time, first-year undergraduates with higher sticker prices or those with sticker prices below $12,000 in public research universities. Sixty-one percent of the full-time, first-year undergraduates with higher sticker prices received federal student financial aid compared with 48 percent of those with sticker prices below $12,000 in public research universities.

Two-thirds of the full-time, first-year undergraduates with higher sticker prices received institutional student financial aid, as did 30 percent of those with sticker prices below $12,000 in public research universities. This is consistent with other research (Lee and Clery, 1999) that found that undergraduates in private, not-for-profit institutions were more likely to receive institutional aid than were those in public 4-year institutions. Lee and Clery found that 18 percent of the full-time undergraduates attending public 4-year institutions received institutional aid, as did 47 percent of those who attended private, not-for-profit 4-year institutions.

Employer aid is more frequently awarded to undergraduates who attended part-time rather than full-time (Lee and Clery, 1999). The results of this analysis found a small, but statistically

significant difference in the probability of receiving employer aid between the two groups of full-time, first-time undergraduates. Employer aid was received by 4 percent of the full-time, first-year undergraduates with higher sticker prices and 2 percent of those with sticker prices below $12,000 in public research universities.

Full-time, first-year undergraduates with higher sticker prices were more likely to receive grants, loans or work-study awards than were those with sticker prices below $12,000 in public research universities. Seventy-two percent of the full-time, first-year undergraduates with higher sticker prices received grants compared with 53 percent of those with sticker prices below $12,000 in public research universities. Fifty-eight percent of those with higher sticker prices received loans compared with 42 percent of those with sticker prices below $12,000 in public research universities.

Full-time, first-year undergraduates with higher sticker prices were more likely to receive aid packages that included multiple types of aid than were those with sticker prices below $12,000 in public research universities. Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were more likely to receive loans or grants with no other types of aid than were those with higher sticker prices. Eight percent of those with sticker prices below $12,000 in public research universities received loans only compared with 3 percent of those with higher sticker prices. Twenty-three percent of those with sticker prices below $12,000 in public research universities received grants only compared with 16 percent of those with higher sticker prices. Forty-two percent of the full-time, first-year undergraduates with higher sticker prices received combinations of loans, work-study, grants, and other types of aid compared with 20 percent of those with sticker prices below $12,000 in public research universities.

Table 4–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to type and source of aid, and type of aid package received, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Total aid			
Did receive aid	78.5	68.6	75.2
Did not receive aid	21.5	31.4	24.8

Table 4–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to type and source of aid, and type of aid package received, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Federal aid (except VA/DOD)[2]			
Did receive federal aid	60.8	48.0	59.2
Did not receive federal aid	39.2	52.0	40.8
Institutional aid			
Did receive institutional aid	65.7	30.3	31.3
Did not receive institutional aid	34.3	69.7	68.7
Employer aid			
Did receive employer aid	3.9	2.2	2.4
Did not receive employer aid	96.1	97.8	97.6
State aid			
Did receive state aid	24.6	21.0	23.7
Did not receive state aid	75.4	79.0	76.3
Grant aid			
Did receive grant aid	72.1	53.3	61.4
Did not receive grant aid	27.9	46.7	38.6
Loan (except PLUS)[3]			
Did receive loan	58.2	41.6	45.7
Did not receive loan	41.8	58.4	54.3
Work-study			
Did receive work-study	32.9	6.5	11.4
Did not receive work-study	67.1	93.5	88.6
Parents helped with direct contribution			
Student did receive direct contribution from parent	91.9	79.6	70.8
Student did not receive direct contribution from parent	8.1	20.4	29.2
Other type of aid (including assistantship and PLUS)[3]			
Did receive other type	16.0	14.8	12.5
Did not receive other type	84.0	85.2	87.5
Other source of aid (including VA/DOD)[2]			
Did receive other source of aid	28.0	21.8	17.7
Did not receive other source of aid	72.0	78.2	82.3

Table 4–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to type and source of aid, and type of aid package received, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Aid package			
Loans and grants	16.6	18.1	21.4
Loans only	3.0	7.7	8.0
Grants only	16.4	23.0	23.4
Work-study only	0.1	0.2	0.2
Other aid combination[4]	42.4	19.6	22.2
No aid received	21.5	31.4	24.8

[1]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

[2]Veterans Administration/Department of Defense.

[3]PLUS loans are unsubsidized variable-interest rate loans awarded to parents of dependent students who are able to meet criteria for credit worthiness.

[4]Examples of other aid combinations are: loans, grants and work-study; work-study and grants; work-study and loans.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

WORKING

The majority of full-time, first-year undergraduates attending colleges or universities in both groups worked while attending school. Full-time, first-year undergraduates with higher sticker prices were more likely to work between one and 14 hours a week while they were in school than were those with sticker prices below $12,000 in public research universities, but were less likely to work more hours per week. Thirty-seven percent of the full-time, first-year undergraduates with higher sticker prices who worked did so for less than 15 hours a week compared with 18 percent of those with sticker prices below $12,000 in public research universities (table 3). Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were more likely to work 15 to 29 hours per week or 30 or more hours a week while they attended classes than were those with higher sticker prices. Sixteen percent of those in institutions with higher sticker prices worked 15 to 29 hours compared with 25 percent of

those with sticker prices below $12,000 in public research universities. Ten percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities worked 30 or more hours per week compared with 7 percent of those with higher sticker prices. The percent of full-time, first-year undergraduates who did not work while attending school did not differ between the two groups.

One-third of the full-time, first-year undergraduates with higher sticker prices participated in college work-study programs compared with 7 percent of those with sticker prices below $12,000 in public research universities.

PARENTAL SUPPORT

As noted earlier, 98 percent of the full-time, first-year undergraduates in both sticker price groups were financially dependent on their parents. The results indicate that parents were more likely to provide financial support to full-time, first-year undergraduates with higher sticker prices compared with those with sticker prices below $12,000 in public research universities. Parents provided direct support[5] to full-time, first-year undergraduates with higher sticker prices in 92 percent of the cases (table 4). Eighty percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities received direct financial help from their parents.

AMOUNT OF AID

The average amount of aid received by full-time, first-year undergraduates was higher for full-time, first-year undergraduates with higher sticker prices compared with the amount received by those with sticker prices below $12,000 in public research universities. In fact, financial aid recipients with higher sticker prices received more than twice as much financial aid[6] (including institutional aid) on average than did those with sticker prices below $12,000 in public research universities, $12,678 compared with $5,766 (table 5).

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[5]Direct support from the parents can include payment for any one or combination of tuition, housing, meals or books. Parents may provide incidental money for other student expenditures, which is not included in direct support from parents.

[6]Total aid includes all sources (federal, state, institutional and other) and types (loan—including PLUS loans, grant, work-study and other) of aid.

Table 5–Average amount of aid received by full-time, first-year undergraduates in 4-year institutions according to type or source of aid, and average sticker price, by sticker price and Carnegie classification: 1995-96

	Total aid amount	State aid amount	Institutional aid amount	Federal aid amount[1]	Grant aid amount	Loan amount[2]	Sticker price	Non-tuition costs[3]
Total	$7,035	$1,931	$4,409	$4,734	$4,570	$3,092	$6,697	$6,753
Sticker price and Carnegie classification[4]								
Undergraduates with higher sticker prices	12,678	2,230	7,490	6,253	8,420	3,703	16,293	7,292
Undergraduates in public research universities with sticker prices below $12,000	5,766	2,231	2,805	4,718	3,657	2,788	4,054	7,385
Undergraduates in other 4-year institutions with sticker prices below $12,000	5,317	1,712	2,630	4,165	3,214	2,913	4,192	6,307

[1]Indicates the total amount of federal financial aid, excluding Veterans Administration Department of Defense (VA/DOD).
[2]Indicates the total amount of all loans (federal, state, institutional, and private sector) except PLUS. PLUS loans are unsubsidized variable-interest rate loans awarded to parents of dependent students who are able to meet criteria for credit worthiness.
[3]Non-tuition costs include books and supplies, room and board, transportation and personal expenses.
[4]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System

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INFLUENCES

Four factors were positively associated with undergraduates with higher sticker prices when compared with those with sticker prices below $12,000 in public research universities (table 6). One-half of the full-time, first-year undergraduates with higher sticker prices indicated that the school's good reputation was a reason for enrolling compared with 41 percent of those with sticker prices below $12,000 in public research universities. The second factor was receiving more student financial aid. Twelve percent of the full-time, first-year undergraduates with higher sticker prices indicated that the receipt of more financial aid was a reason for enrolling compared with 6 percent of those with sticker prices below $12,000 in public research universities. The third factor was faculty reputation. Seven percent of the full-time, first-year undergraduates with higher sticker prices said that faculty reputation was a reason for attending compared with 2 percent of those with sticker prices below $12,000 in public research universities. The final factor was job placement. Five percent of the full-time, first-year undergraduates with higher sticker prices indicated that the job placement rate was a reason to enroll in the institution compared with 1 percent of those with sticker prices below $12,000 in public research universities.

Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities indicated a different set of factors they considered in making their selection than those with higher sticker prices. First, 31 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities indicated that being able to live close to home was a consideration in their enrollment. Seventeen percent of those with higher sticker prices said that living close to home was a factor in their enrollment decision. The second factor was low tuition. Ten percent of the full-time, first-year undergraduates in public universities indicated that low tuition was important compared with 1 percent of those with higher sticker prices. The third factor was the attendance of friends or spouses. Eight percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities indicated this as a reason for enrolling compared with 3 percent of those with higher sticker prices. The fourth factor was the option to live at home, which was a reason given by 5 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities compared with 2 percent of those with higher sticker prices.

Table 6–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduates' reasons for attendance, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Institution has good reputation			
Institution reputation was a reason for attendance	50.4	41.1	28.4
Institution reputation was not a reason for attendance	49.6	58.9	71.6
Received more financial aid			
Received more financial aid was a reason for attendance	12.3	5.5	6.4
Received more financial aid was not a reason for attendance	87.7	94.5	93.6
Faculty reputation			
Faculty reputation was a reason for attendance	7.0	2.2	3.9
Faculty reputation was not a reason for attendance	93.0	97.8	96.1
Institution job placement rate			
Job placement rate was a reason for attendance	4.6	1.2	2.2
Job placement rate was not a reason for attendance	95.4	98.8	97.8
Institution close to home			
Institution close to home was a reason for attendance	17.4	30.8	36.3
Institution close to home was not a reason for for attendance	82.6	69.2	63.7
Low tuition[2]			
Low tuition was a reason for attendance	0.8	9.8	5.4
Low tuition was not a reason for attendance	99.2	90.2	94.6
Friends or spouse attend institution			
Friends or spouse attending was a reason for attendance	3.3	7.5	7.0
Friends or spouse attending was not a reason for attendance	96.7	92.5	93.0
Could live at home if attended			
Could live at home was a reason for attendance	1.8	4.5	6.0
Could live at home was not a reason for attendance	98.2	95.5	94.0

Table 6–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduates' reasons for attendance, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Parent(s) want student to attend			
Parent(s) wanting student to attend was a reason for attendance	0.8	2.3	1.0
Parent(s) wanting student to attend was not a reason for attendance	99.2	97.7	99.0
Shorter time to finish			
Shorter time to finish was a reason for attendance	0.3	0.1	0.3
Shorter time to finish was not a reason for attendance	99.7	99.9	99.7
Teacher or guidance counselor recommendation			
Teacher or guidance counselor recommendation was a reason for attendance	1.0	0.4	1.1
Teacher or guidance counselor recommendation was not a reason for attendance	99.0	99.6	98.9
Liked the campus			
Campus was a reason for attendance	23.4	19.4	12.6
Campus was not a reason for attendance	76.6	80.6	87.4
Other reputation reason			
Other reputation reasons were reasons for attendance	37.2	22.7	28.2
Other reputation reasons were not reasons for attendance	62.8	77.3	71.8
Parent(s) attended the institution			
Parent(s) attended the institution was a reason for attendance	2.5	3.2	2.5
Parent(s) attended the institution was not a reason for attendance	97.5	96.8	97.5

[1]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

"Low" as interpreted by the respondent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

ACADEMIC DIFFERENCES

Two measures of academic preparation, needing to take remedial classes and having taken Advanced Placement (AP) tests, indicate that both full-time, first-year undergraduates attending institutions with higher sticker prices, and those with sticker prices below $12,000 in public research universities, are likely to be academically prepared (table 7). Ten percent or less of the full-time, first-year undergraduates in both groups took remedial classes.

The College Board sponsors AP tests in 32 subject areas. Compared with regular high school courses, AP preparation courses are usually more demanding. Over forty percent of the full-time, first-year undergraduates in both groups took at least one AP test. This result suggests that a high number of entering undergraduates in both categories made this extra educational effort to prepare for college and perhaps to complete college work early.

One indicator of academic potential that did discriminate between undergraduates in the two groups was the percentage of full-time, first-year undergraduates who had Scholastic Aptitude Test (SAT) scores of 1,300 or higher (out of a maximum of 1,600). Seventeen percent of the full-time, first-year undergraduates with higher sticker prices had SAT scores of 1,300 or higher compared with 10 percent of those with sticker prices below $12,000 in public research universities[7].

Another academic variable that differentiated between the two groups of undergraduates was undergraduate grade point average (GPA). Nine percent of the full-time, first-year undergraduates with higher sticker prices reported GPAs of less than 2.00 on a 4.00 point scale. That compares with 18 percent of those with sticker prices below $12,000 in public research universities. Sixty-one percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities obtained GPAs between 2.00 and 3.49, compared with 68

[7]Although differences were seen in the percentages of full-time, first-year undergraduates with SAT scores of 1,300 or higher, SAT of 1,300 was the threshold of this difference. A higher percentage of those with higher sticker prices had SAT scores of 1,300 or higher than those with sticker prices below $12,000 in public research universities; however, the percentages of full-time, first-year undergraduates with SAT scores of 1,200 or higher in the two groups were not statistically different (NPSAS:96 DAS, not in table).

percent of those with higher sticker prices. There was no difference in the percent of full-time, first-year undergraduates receiving GPAs of 3.5 or higher.

The results show that the academic majors pursued by full-time, first-year undergraduates in the two groups differed. Full-time, first-year undergraduates with higher sticker prices were more likely to major in humanities, social, behavioral, and life sciences than were those with sticker prices below $12,000 in public research universities. Forty-two percent of the full-time, first-year undergraduates with higher sticker prices majored in these fields compared with 32 percent of those with sticker prices below $12,000 in public research universities. On the other hand, 21 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities majored in physical science, engineering, computer science, or mathematics compared with 13 percent of those with higher sticker prices.

Kuh and Vesper (1997) found an attribute of good educational practice is the amount of interaction out of class between students and teachers. One of the research questions is whether full-time, first-year undergraduates with higher sticker prices had more interactions with faculty members than those with sticker prices below $12,000 in public research universities. The data show that full-time, first-year undergraduates with higher sticker prices were more likely to have social contact with faculty members than were those with sticker prices below $12,000 in public research universities. One-half of the full-time, first-year undergraduates with higher sticker prices indicated that they sometimes had social contact with faculty members compared with 42 percent of those with sticker prices below $12,000 in public research universities. Sixteen percent of the full-time, first-year undergraduates with higher sticker prices said that they often had social contact with faculty members, compared with 8 percent of those with sticker prices below $12,000 in public research universities.

Table 7–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduates' academic differences and undergraduates' social contact with faculty, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Remedial courses			
Did take remedial courses	6.8	9.8	20.8
Did not take remedial courses	93.2	90.2	79.2

Table 7–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduates' academic differences and undergraduates' social contact with faculty, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Number of Advanced Placement (AP) tests taken			
Student took one or more placement tests	48.0	44.2	18.6
Student took no placement test	52.0	55.8	81.4
Scholastic Aptitude Test (SAT) score, combined verbal and mathematics			
Less than 1,000	33.0	40.4	73.5
1,000-1,299	50.3	50.1	23.5
1,300-1,600	16.7	9.5	3.0
Grade point average			
Less than 2.00	9.1	17.6	24.9
2.00-3.49	67.6	60.7	62.0
3.50 or higher	23.2	21.7	13.2
Undergraduate field of study			
Humanities, social, behavioral, life sciences	42.2	32.3	33.3
Physical sciences, engineering, computer science, mathematics	12.7	21.1	15.6
Education	7.3	6.4	11.6
Business, management	17.9	15.6	18.5
Health, other	19.8	24.7	21.1
Have social contact with faculty			
Never	33.9	50.1	44.9
Sometimes	49.9	42.2	42.3
Often	16.2	7.7	12.8

* The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

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EXPECTATIONS AND GOALS

The educational goals of full-time, first-year undergraduates did not differ significantly between those with higher sticker prices and those with sticker prices below $12,000 in public research universities (table 8). One-half of the undergraduates in both groups expected to obtain master's degrees or post-baccalaureate certificates. About one in three of the undergraduates in each group expected doctoral or first-professional degrees as their highest degrees, and approximately one in six expected to stop their education at the bachelor's degree level.

Full-time, first-year undergraduates with higher sticker prices and those with sticker prices below $12,000 in public research universities held similar personal goals in several areas. For example, there were no differences between undergraduates with higher sticker prices or those with sticker prices below $12,000 in public research universities with regard to: wanting to become authorities in their field, being leaders in the community, influencing the political structure, having leisure time, succeeding in their careers, or raising families. In fact, only one personal goal differentiated full-time, first-year undergraduates with higher sticker prices from those with sticker prices below $12,000 in public research universities. Sixty-nine percent of the undergraduates with higher sticker prices indicated the long-term goal of financial wealth as a reason for attendance, compared with 78 percent of those with sticker prices below $12,000 in public research universities.

Table 8–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to highest level of education ever expected to complete, long-term goals as reasons for attendance and important personal goals, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Highest level of education ever expected to complete			
Less than Bachelor's degree	0.6	0.6	3.0
Bachelor's degree	14.2	16.1	26.7
Master's degree or post-baccalaureate program	50.2	50.3	50.2
Advanced degree-doctoral or first-professional	35.1	33.1	20.2

Table 8–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to highest level of education ever expected to complete, long-term goals as reasons for attendance and important personal goals, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Important personal goals:			
Becoming an authority in a field			
Becoming an authority in a field was an important personal goal	77.6	78.2	78.5
Becoming an authority in a field was not an important personal goal	22.4	21.8	21.5
Be a leader in the community			
Being a leader in the community was an important personal goal	68.6	68.3	66.6
Being a leader in the community was not an important personal goal	31.4	31.7	33.4
Influence political structure			
Influencing political structure was an important personal goal	36.0	33.7	36.2
Influencing political structure was not an important personal goal	64.0	66.3	63.8
Have leisure time			
Having leisure time was an important personal goal	98.0	97.6	97.5
Having leisure time was not an important personal goal	2.0	2.4	2.5
Succeed in career			
Succeeding in my career was an important personal goal	97.9	98.0	97.7
Succeeding in my career was not an important personal goal	2.1	2.0	2.3
Raise a family			
Raising a family was an important personal goal	89.1	90.7	89.7
Raising a family was not an important personal goal	10.9	9.3	10.3
Important personal goals:			
Succeed in own business			
Succeeding in my own business was an important personal goal	61.8	66.4	68.8
Succeeding in my own business was not an important personal goal	38.2	33.6	31.2

Table 8–Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to highest level of education ever expected to complete, long-term goals as reasons for attendance and important personal goals, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Long-term goals as reasons for attendance:			
Financial wealth			
Financial wealth reason for attendance	69.2	77.8	79.3
Financial wealth not reason for attendance	30.8	22.2	20.7
Leaving home			
Leaving home reason for attendance	30.2	32.4	39.6
Leaving home not reason for attendance	69.8	67.6	60.4
Offer better opportunities to children			
Chances for better opportunities to children reason for attendance	88.5	90.5	93.8
Chances for better opportunities to children not reason for attendance	11.5	9.5	6.2

*The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

SATISFACTION

Knox, Lindsay and Kolb (1992) found only weak direct effects of college characteristics on student satisfaction. There was also no systematic pattern to these findings. They found that the larger the student enrollment, the greater the odds of being satisfied with recreation and sports facilities, and the higher the percentage of undergraduates attending an institution full-time, the higher were the odds of being satisfied with the social life on the campus. While the percentage of undergraduates living on-campus did not have any significant effect on student satisfaction with the academic life of the campus, it did have a positive relationship with satisfaction with social life and the prestige of the school. They found no significant differences among undergraduates in different majors in their satisfaction with their education. Undergraduates who obtained higher grades were more satisfied with their academic experience than were those with lower grades.

Table 9 provides information on several measures of undergraduate satisfaction that include items connected with academic offerings, extra-curricular opportunities, and cost of attendance. Three measures of satisfaction with the academic program suggest that full-time, first-year undergraduates with higher sticker prices are more satisfied with the academic program than are those with sticker prices below $12,000 in public research universities. Eighty-three percent of the full-time, first-year undergraduates with higher sticker prices were satisfied with availability of courses compared with 70 percent of those with sticker prices below $12,000 in public research universities. In 95 percent of the cases, full-time, first-year undergraduates with higher sticker prices were satisfied with their instructors' ability to teach. That compared with 87 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities who were similarly satisfied. Ninety-seven percent of the full-time, first-year undergraduates with higher sticker prices were satisfied with class size compared with 78 percent of those with sticker prices below $12,000 in public research universities.

Nearly all full-time, first-year undergraduates were satisfied with the prestige of their school whether they attended institutions with sticker prices of $12,000 or more or with sticker prices below $12,000 in public research universities. Ninety-three percent of those with higher sticker prices and 92 percent of those with sticker prices below $12,000 in public research universities were satisfied with the prestige of their institution.

Most full-time, first-year undergraduates in both groups were satisfied with the social and extracurricular activities, and the sports and recreational programs on their campuses. Ninety percent of full-time, first-year undergraduates with higher sticker prices were satisfied with the social life of the institutions, while 94 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities indicated that they were satisfied. Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were also more likely to be satisfied with sports and recreational programs on campuses than were those with higher sticker prices. Ninety-six percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were satisfied with the sports and recreational programs on campus compared with 92 percent of those with higher sticker prices.

Participation in varsity sports was more likely for full-time, first-year undergraduates with higher sticker prices than it was for those with sticker prices below $12,000 in public research universities. Twenty percent of those with higher sticker prices said they participated often compared with 7 percent of those with sticker prices below $12,000 in public research universities.

Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were more likely to report that they were satisfied with the cost of attendance than were those with higher sticker prices. Seventy-four percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were satisfied with the cost of attendance compared with 48 percent of those with higher sticker prices.

Table 9—Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduates' satisfaction, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Course availability			
Satisfied with course availability	83.2	70.2	75.4
Not satisfied with course availability	16.8	29.8	24.6
Instructors' ability to teach			
Satisfied with instructors' ability to teach	95.2	86.9	88.1
Not satisfied with instructors' ability to teach	4.8	13.1	11.9

Table 9—Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduates' satisfaction, by sticker price and Carnegie classification: 1995-96—Continued

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Class size			
Satisfied with class size	96.6	78.0	93.5
Not satisfied with class size	3.4	22.0	6.5
Prestige of school			
Satisfied with prestige of school	93.1	92.2	84.3
Not satisfied with the prestige of school	6.9	7.8	15.7
Social life			
Satisfied with social life	89.9	93.6	90.4
Not satisfied with social life	10.1	6.4	9.6
Sports and recreational activities[2]			
Satisfied with sports and recreational activities	91.7	96.4	92.7
Not satisfied with sports and recreational activities	8.3	3.6	7.3
Participated in varsity sports			
Never	75.1	90.8	83.8
Sometimes	4.8	2.7	4.6
Often	20.2	6.5	11.7
Cost of attendance			
Satisfied with cost of attendance	47.9	73.8	72.6
Not satisfied with cost of attendance	52.1	26.2	27.4
Cultural activities			
Satisfied with cultural activities	96.5	97.9	96.1
Not satisfied with cultural activities	3.5	2.1	3.9

[1]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

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COMMUNITY PARTICIPATION

Two measures of full-time, first-year undergraduates' public involvement are the propensity to participate in the political life of the community and the willingness to volunteer time to community service projects (table 10). Political participation did not differ between full-time, first-year undergraduates with higher sticker prices and those with sticker prices below $12,000 in public research universities. Nearly one-third participated in political activities and over 80 percent said that they would vote in the 1996 presidential election[8].

Full-time, first-year undergraduates with higher sticker prices were more likely to volunteer[9] than were those with sticker prices below $12,000 in public research universities. Forty-three percent of those with higher sticker prices volunteered once compared to 36 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities, and 20 percent of those with higher sticker prices volunteered for two or more activities, compared to 15 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities.

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[8]Respondents may have been interviewed prior to the 1996 election; thus, they were asked to indicate if they did or would vote in the 1996 presidential election.

[9]Types of volunteer work include such things as working with children as a coach or in a scouting troop, volunteering at a hospital, nursing home, group home, volunteering at an adult literacy project, working with children as tutor or mentor, volunteering for neighborhood improvement and cleanup projects, working at a telephone crisis center, raising money for non-political purpose, raising money or volunteering for political campaign, participating in other type of community service, or working at a shelter or soup kitchen.

Table 10—Percentage distribution of full-time, first-year undergraduates in 4-year institutions according to undergraduates' community participation, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more*	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Participation in political activities, 1995-96			
Did participate in political activities	31.7	26.5	21.4
Did not participate in political activities	68.3	73.5	78.6
Will vote in 1996 presidential election			
Will vote in 1996 presidential election	86.9	82.8	80.3
Will not vote in 1996 presidential election	13.1	17.2	19.7
Number of community service or volunteer activities participated in			
None	36.5	48.9	59.2
One	43.2	36.4	30.2
Two or more	20.3	14.8	10.6

*The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

PERSISTENCE

Research on student persistence in the first year suggests that first-year persistence (attending full-time for the first year at the same institution) predicts longer-term persistence. In a previous study by Horn (1998), it was found that 16 percent of the full-time, first-year undergraduates who started in 4-year institutions interrupted their enrollment in the first year. Although some of these early dropouts returned or re-enrolled in other institutions, early departure was a good predictor of longer-term non-persistence. Forty-two percent of those who left their first institution by the end of their first year had not received a degree or continued their enrollment by the end of the study in 1994. In comparison, 17 percent of those who continued past their first year failed to receive a degree or continue their enrollment.

Other research by Tinto (1998) confirms the importance of persisting in the first year. One-half of the full-time, first-year undergraduates who are going to drop out do so in the first year.

Horn and Premo (1996, p. 20) developed a risk index that has proven to be a good predictor of student persistence. The index includes the following student characteristics: being older than the typical age for year in school, being financially independent, having dependents, working full-time while enrolled, being a single parent, having a General Education Development (GED) certificate or high school equivalency certificate instead of a diploma, and enrolling part-time. Ottenger (1991) reported that the following factors were associated with persistence for full-time, first-year undergraduates: being Asian or white rather than Hispanic or African-American, being from a high socio-economic status (SES) background rather than from a lower SES background, and having higher measured academic ability.

Mortenson (1997) investigated the relationship of institutional control with persistence. He used American College Testing data to document 5-year institutional graduation rates. He found that the average institutional graduation rate for private, not-for-profit institutions was 57 percent compared with 44 percent for public 4-year institutions. Mortenson found that the more selective an institution's admission standards, the higher the graduation rate. Public institutions had a lower graduation rate than private, not-for-profit institutions at each level of Carnegie clas-

sification. Cuccaro-Alamin (1997, p. 13) indicates that undergraduates in public 4-year institutions take longer to complete their bachelor's degrees than do undergraduates at private, not-for-profit institutions: fifty-three percent of those who started at private, not-for-profit institutions received their degrees in four years compared with 28 percent of those in public institutions.

In this analysis, persistence is not defined as continuing enrollment until an undergraduate obtains a degree. Rather, full-time persistence is defined as enrolling full-time in the same institution for the first academic year. Undergraduates who leave the initial institution, even if they enroll in another institution, or those who continue at the same institution, but enroll less than full-time in the first year, are not counted as persisting undergraduates.

By this measure of persistence, full-time, first-year undergraduates with higher sticker prices were more likely to persist than were those with sticker prices below $12,000 in public research universities. Table 11 shows the different enrollment sequences for full-time, first-year undergraduates. The results show that 97 percent of the full-time, first-year undergraduates with higher sticker prices continued full-time in the same institution through their first year (also shown on table 12). Eighty-four percent of those who enrolled with sticker prices below $12,000 in public research universities continued their enrollment full-time for the first year.

The largest group of non-persisting first-year undergraduates who began in the fall full-time with sticker prices below $12,000 in public research universities, attended part-year (9 percent, table 11). This compared with 1 percent of those with higher sticker prices. Another 3 percent of the full-time, first-year undergraduates with sticker prices below $12,000 in public research universities started full-time, but did not complete the fall term as a full-time student[10] compared with less than 1 percent of the full-time, first-year undergraduates with higher sticker prices.

[10]In this report, the definition of a full-time, first-year student is one who was enrolled full-time as of September 1995. However, a student could have reduced his or her hours, or dropped out sometime during the fall term, after September 1995.

Table 11–Percentage distribution of first-year undergraduates who started full-time in the fall term in 4-year institutions according to attendance pattern for the academic year, by sticker price and Carnegie classification: 1995-96

	Sticker price $12,000 or more[1]	Sticker price below $12,000	
	Undergraduates with higher sticker prices	Undergraduates in public research universities	Undergraduates in other 4-year institutions
Total	100.0	100.0	100.0
Attendance pattern, 1995-96[2]			
Full-time, full-year, 1 institution	96.7	84.2	76.6
Full-time, full-year, more than 1 institution	1.8	3.2	3.1
Full-time, part-year	0.9	9.3	16.6
Part-time, full-year, 1 institution	0.5	2.9	2.6
Part-time, full-year, more than 1 institution	0.2	0.2	0.3
Part-time, part-year	#	0.3	0.7

[1]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

[2]The definition of a full-time, first-year student is one who was enrolled full-time as of September 1995. However, a student could have reduced his or her hours, or dropped out sometime during the fall term, after September 1995. Thus, this student's enrollment pattern for the academic year (a separate, retrospective, variable) would not be considered full-time for the 1995 fall term.

#Estimate too small to report.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

MULTIVARIATE ANALYSIS OF PERSISTENCE

Table 12 shows the relationship between individual student characteristics and the probability of persisting full-time, followed by a multivariate analysis that includes consideration for the interaction among characteristics that are associated with persistence. The analysis will help determine if the greater probability of persisting demonstrated by first-year, full-time undergraduates with higher sticker prices compared with those with sticker prices below $12,000 in public research universities can be explained by differences in student characteristics of those in the two sticker price groups.

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The data in table 12 represent the cases in all three groups of undergraduates. The first column shows the percentage of full-time, first-year undergraduates who persisted for their first year in the same institution. Undergraduates in each of the three groups (those with higher sticker prices, those with sticker prices below $12,000 in public research universities, and those with sticker prices below $12,000 in other 4-year institutions) are included as row variables.

Both institutional and student characteristics are related to the probability that full-time, first-year undergraduates will persist full-time through their first year of enrollment. Because these student characteristics are related to one another—for example, older full-time, first-year undergraduates are more likely to be independent, be married or work more while enrolled—the tables before the percentages were adjusted cannot reveal the unique relationship that each one of these variables has on persistence. Because undergraduate characteristics vary systematically by the sticker price they face, it is important to make the comparison of persistence between the two groups without the confounding influence of other related variables. Table 12 displays information about how certain characteristics are related to persistence after controlling for the other factors reported in table 12.

The results show that after adjusting for other related variables, persistence is positively related to having sticker prices of $12,000 or more. The adjusted percentage of full-time, first-year undergraduates with higher sticker prices who persisted is 90 percent, compared to the adjusted 82 percent for full-time, first-year undergraduates with sticker prices below $12,000 in public research universities.

Table 12—Percentage of full-time, first-year undergraduates in 4-year institutions who persisted full-time at the same institution for the full year in 1995-96, and the adjusted percentage after controlling for the covariation of the variables listed in the table

	Unadjusted percentages[1]	Adjusted percentages[2]	Least squares coefficient[3]	Standard error[4]
Total	82.5	82.5	37.7	6.0
Sticker price and Carnegie classification[5]				
Undergraduates in public research universities with sticker prices below $12,000	84.2 *	82.0 *	-8.2	1.9
Undergraduates in other 4-year institutions with sticker prices below $12,000	76.6 *	79.9 *	-10.3	1.6
Undergraduates higher sticker prices[6]	*96.7*	*90.2*	†	†
Student attended institution in state of legal residence				
Student attended institution out-of-state	86.3 *	81.8	-1.0	1.3
Student attended institution in-state	*81.1*	*82.8*	†	†
Institution required test scores				
Institution did not require test scores	65.2 *	75.9 *	7.1	2.4
Institution did require test scores	*83.5*	*82.9*	†	†
Dependency status				
Dependent	84.5 *	82.0	-8.8	4.3
Independent	*50.5*	*90.8*	†	†
Age				
24-30	42.7 *	62.9 *	-20.1	5.2
31-39	51.8 *	79.9	-3.1	7.3
40 or more	--	72.1	-10.9	9.6
23 or younger	*83.7*	*83.0*	†	†
Marital status				
Married	57.9 *	85.2	2.7	5.6
Not married	*82.9*	*82.5*	†	†
Number of dependents				
No dependents	83.6 *	82.5	-2.3	6.4
Student had one or more dependents	*44.7*	*84.8*	†	†
Delayed enrollment				
Did not delay enrollment	86.5 *	81.3 *	-9.6	2.6
Did delay enrollment	*57.1*	*90.9*	†	†
Number of risk factors				
No risk factors	89.9 *	91.0 *	70.3	7.6
One to three risk factors	58.2 *	55.1 *	34.5	6.9
Four or more risk factors	*34.6*	*20.7*	†	†

Table 12—Percentage of full-time, first-year undergraduates in 4-year institutions who persisted full-time at the same institution for the full year in 1995-96, and the adjusted percentage after controlling for the covariation of the variables listed in the table—Continued

	Unadjusted percentages[1]	Adjusted percentages[2]	Least squares coefficient[3]	Standard error[4]
Gender				
Male	80.4 *	81.9	-1.1	1.1
Female	*84.3*	*83.0*	†	†
Income percentile rank, 1994 (all students)				
25th or less	76.5 *	79.8 *	-5.7	1.7
26th - 50th	81.3 *	81.4 *	-4.1	1.6
51st - 75th	83.3 *	82.9	-2.7	1.5
76th or higher	*88.0*	*85.5*	†	†
First generation student				
Student was first generation	79.3 *	83.1	0.8	1.2
Student was not first generation	*84.0*	*82.3*	†	†
Grade point average				
2.00-3.49	87.2 *	85.8 *	15.1	1.4
3.50-4.00	88.4 *	84.3 *	13.6	1.9
Less than 2.00	*67.4*	*70.8*	†	†
Scholastic Aptitude Test (SAT) score, combined verbal and mathematics				
1,000-1,299	89.9 *	84.5 *	3.3	1.3
1,300-1,600	92.8 *	83.8	2.5	2.5
Less than 1,000	*80.0*	*81.3*	†	†
Number of Advanced Placement (AP) tests taken				
Student took one or more placement tests	90.3 *	84.0	2.1	1.3
Student took no placement tests	*79.7*	*81.9*	†	†
Remedial courses				
Did take remedial courses	79.3	85.8 *	3.8	1.5
Did not take remedial courses	*83.0*	*82.0*	†	†
Average hours worked per week while enrolled				
Worked 1-14 hours	91.1 *	83.0	1.5	1.4
Worked 15-29 hours	80.6	80.2	-1.3	1.3
Worked 30 hours or more	67.1 *	89.2 *	7.7	2.0
Did not work	*84.3*	*81.5*	†	†
Loan (except PLUS)[5]				
Did not receive loan	80.5	81.7	-1.8	1.2
Did receive loan	*84.8 **	*83.5*	†	†

Table 12—Percentage of full-time, first-year undergraduates in 4-year institutions who persisted full-time at the same institution for the full year in 1995-96, and the adjusted percentage after controlling for the covariation of the variables listed in the table—Continued

	Unadjusted percentages[1]	Adjusted percentages[2]	Least squares coefficient[3]	Standard error[4]
Grant aid				
Did not receive grant aid	77.8 *	79.3 *	-5.3	1.3
Did receive grant aid	*85.4*	*84.6*	†	†
Enrollment at institution				
1,000-2,499	84.4	82.5	1.0	3.0
2,500-4,999	83.0	81.6	0.0	3.1
5,000-7,499	81.9	83.6	2.0	3.2
7,500-9,999	82.6	84.1	2.6	3.3
10,000 or more	81.8	82.4	0.8	2.9
Less than 1,000	*86.0*	*81.6*	†	†
Race/ethnicity				
Black, non-Hispanic	76.3	84.1	2.0	1.9
Hispanic	79.5	85.1	2.9	1.9
Asian/Pacific Islander	83.2	80.9	-1.3	2.1
American Indian/Alaskan Native	83.4	88.6	6.4	7.3
Other	76.2	78.9	-3.3	5.6
White, non-Hispanic	*83.8*	*82.2*	†	†

--Sample size is too small for a reliable estimate.

*p < .05
†Not applicable for the reference group.

[1]The estimates are from the NPSAS:96 Undergraduate Data Analysis System.
[2]The percentages are adjusted for differences associated with other variables in the table (see appendix B).
[3]Least squares coefficient, multiplied by 100 to reflect percentage (see appendix B).
[4]Standard error of least squares coefficient, adjusted for design effect, multiplied by 100 to reflect percentage (see appendix B).
[5]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."
[6]The italicized group in each category is the reference group being compared.
[7]The "separated" category is not reported due to a very low number of observations. Because of differences between undergraduates who are separated and those married or not married, separated undergraduates were not combined with either married or not married undergraduates.
[8]PLUS loans are unsubsidized variable-interest rate loans awarded to parents of dependent students who are able to meet criteria for credit worthiness.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995–96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

SUMMARY AND CONCLUSION

Institutions with high tuition play an important role in higher education. Newspaper articles often refer to institutions with high tuition as examples of the rising price of higher education, although lower sticker prices have increased at the same or higher rate. Undergraduates attending these higher-priced institutions fulfill the popular image of residential college campus youth.

Undergraduates attending institutions with sticker prices of $12,000 or more and those with sticker prices below $12,000 in public research universities include younger and financially comparable undergraduates. Based on the income distribution of the full-time, first-year undergraduates enrolled in both groups, it is reasonable to assume that many of those with sticker prices below $12,000 in public research universities could afford to attend institutions with higher sticker prices. Most full-time, first-year undergraduates in both groups are single, 23 years of age or younger, and financially dependent on their parents. The measures of academic preparation also suggest that most of the full-time, first-year undergraduates in both groups were well-qualified. The two exceptions were the larger percent of those with SAT scores over 1,300 with higher sticker prices and the greater propensity of those with sticker prices below $12,000 in public research universities to have undergraduate grade point averages below 2.00.

Full-time, first-year undergraduates with higher sticker prices' reasons for attending were different on several measures than those with sticker prices below $12,000 in public research universities. A larger percentage of full-time, first-year undergraduates with higher sticker prices indicated factors such as reputation, financial aid, and job placement as reasons for attending compared with those with sticker prices below $12,000 in public research universities. A larger percentage of those with sticker prices below $12,000 in public research universities indicated that low tuition, being close to home and parents' wishes influenced them to enroll, compared with those with higher sticker prices.

Satisfaction with the college experience was high for full-time, first-year undergraduates attending in both categories. Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were less satisfied with class availability, instructors'

ability to teach and class size compared with those attending with higher sticker prices. Full-time, first-year undergraduates with sticker prices below $12,000 in public research universities were more likely to be satisfied with the campus social life, and sports and recreational programs than were those with higher sticker prices.

The results suggest that full-time, first-year undergraduates with higher sticker prices were more likely to enroll in liberal arts majors such as humanities, social sciences, and life sciences than were those with sticker prices below $12,000 in public research universities. Those with sticker prices below $12,000 in public research universities were more likely to be enrolled in physical sciences, engineering, computer sciences or mathematics than those with higher sticker prices.

Even after student characteristics are taken into consideration, persistence in the first year of enrollment was higher for full-time, first-year undergraduates with higher sticker prices compared with those with sticker prices below $12,000 in public research universities. The results suggest the need for more research on the factors that might explain the difference in first-year persistence reported in this report.

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APPENDIX A: GLOSSARY

This glossary describes the variables used in this report. The variables were taken directly from the NCES NPSAS:96 Undergraduate Data Analysis System (DAS). This is an NCES software application that generates tables from the NPSAS:96 data. A description of the DAS software can be found in appendix B. The variables used in this analysis were either items taken directly from the surveys or derived by combining one or more items in these surveys.

The variables listed in the index below are in the order they appear in the report; the glossary is in alphabetical order by DAS variable name (displayed along the right-hand column).

INTRODUCTION VARIABLES

Attendance intensity ATTEND2
First-time beginner 1995-96 ..... FTBTYPE
Institution level 1995-96 ..... LEVEL
Comparative tuition level PRESTIG2
Institutional control ..... CONTROL
Carnegie classification ..... CARNEGIE

STUDENT CHARACTERISTICS

Marital status ..... SMARITAL
Age as of 12/31/95 ..... AGE
Dependency status ..... DEPEND
Income and dependency level ..... INCOME
First generation student ..... PAREDUC
Number of risk factors ..... RISKINDX
High school degree or equivalent ..... HSDEG
Number of dependents ..... NDEPEND
Race/ethnicity of student ..... RACE
Student attended institution in state of legal residence ..... SAMESTAT
Student housing status, 1995-96 ..... LOCALRES
Single parent, independent student ..... SINGLPAR
Grade point average GPA2
Delayed enrollment ..... DELAYED
Gender of student ..... GENDER
Degree program ..... DEGFIRST
Income percentile rank, 1994 (all students) PCTALL2

AID VARIABLES

Total aid ..... TOTAID
State aid ..... STATEAMT
Federal aid (except VA/DOD) ..... TFEDAID
Institutional aid ..... INSTAMT
Employer aid ..... EMPLYAMT
Other type of aid ..... TOTOTHR
Grant ..... TOTGRT
Loan (except PLUS) ..... TOTLOAN
Work-study ..... TOTWKST
Other source of aid ..... OTHERSCR
Average hours worked per week while enrolled ..... HRSWORK
Parents helped with direct contribution 1995-96 ..... PARPDIR

REASONS FOR ATTENDANCE

Institution has good reputation ..... REPUTATN
Received more financial aid ..... MOREAID
Faculty reputation ..... PROFESOR
Institution job placement rate ..... PLACEMNT
Institution close to home ..... SCHCLOSE
Low tuition ..... TUITLESS
Friends or spouse attend institution ..... FRIENDAT
Could live at home if attended ..... LIVEHOME
Parent(s) attended the institution ..... PARNATT
Parent(s) want student to attend ..... PARENT
Shorter time to finish ..... SHORTER
Teacher or guidance counselor recommended ..... TEACHER
Liked the campus ..... SURROUND
Other reputation reason ..... INFLUNCE

ACADEMIC DIFFERENCES

Remedial courses ..... ANYREM
Number of Advanced Placement (AP) tests taken ..... APTEST
Scholastic Aptitude Test (SAT) score, combined verbal and mathematics ..... TESATCRE

Undergraduate field of study MAJORS3
Highest level of education ever expected to complete ..... SBHIGHED

SOCIAL CONTACT WITH FACULTY
Have social contact with faculty ..... SISOCIAL

LONG-TERM GOALS AS REASONS FOR ATTENDANCE
Becoming an authority in a field ..... SIAUTH
Be a leader in the community ..... SILEAD
Influence political structure ..... SIINFL
Have leisure time ..... SILEISR
Succeed in career ..... SISUCCAR
Raise a family ..... SIFAMILY
Financial wealth ..... SIFINC
Leaving home ..... SIAWAY
Offer better opportunities to children ..... SIBTROPP
Succeed in own business ..... SIBUSIN

STUDENT SATISFACTION
Course availability ..... SICOURS
Instructors' ability to teach ..... SITEACH
Class size ..... SICLSIZE
Prestige of school ..... SIPRSTG
Social life ..... SISOCLIF
Sports and recreational activities ..... SPORTS
Participated in varsity sports ..... SIVARSTY
Cost of attendance ..... SICOST
Cultural activities ..... CULTUR

COMMUNITY PARTICIPATION
Participation in political activities, 1995-96 ..... POLACT
Will vote in '96 presidential election SQVOTE96
Number of community service or volunteer activities participated in ..... COMMNUM

INSTITUTION CHARACTERISTICS
Sticker price ..... TUITION
Institution required test scores ADMREQ3
Enrollment ..... ENRLSIZE

PERSISTENCE
Attendance pattern ..... ATTNSTAT

VARIABLE LIST

Institution required test scores **ADMREQ3**

Indicates whether the NPSAS institution required test scores.

Institution required test scores
Institution did not require test scores

Age as of 12/31/95 **AGE**

23 or younger
24-30
31-39
40 or older

Remedial courses **ANYREM**

Indicates whether the student reported ever having taken any remedial or developmental courses in language, math, reading, writing, or study skills. The question was worded as follows: During 1995-96, did you take remedial or developmental courses?

Did take remedial courses
Did not take remedial courses

Number of Advanced Placement (AP) tests taken **APTEST**

This variable represents a count of advanced placement tests student reported having taken. The question was worded as follows: Did you take any AP tests (advanced placement)? Which ones did you take and what was your score? Art, history of art, Art-studio (drawing general portfolio); biology; chemistry; computer science; microeconomics and/or macroeconomics; English language composition and/or literature and composition; French language and/or literature; German language; government and politics-comparative; U.S. government and politics; European history; U.S. history; Latin language and/or literature; calculus; music theory; physics; psychology; Spanish language and/or literature. AP test variables recoded to zero if student reported taking no AP tests. This variable applies to telephone respondents.

Student took one or more placement tests
Student took no placement test

Attendance intensity **ATTEND2**

Student's attendance status in September 1995 as defined by the institution.

Full-time
Part-time

Attendance pattern **ATTNSTAT**

Indicates a student's attendance intensity and persistence during 1995-96. Intensity refers to the student's full- or part-time attendance while enrolled. Persistence refers to the number of months a student was enrolled during the year. Students were considered to have enrolled for a full year if they were enrolled 8 or more months during the NPSAS year. Students did not have to be enrolled for a full month in order to be considered enrolled for that month.

Full-time, full year	Enrolled 8 or more months full-time during 1995-96 at one institution. Additional months enrolled could be part-time enrollment.
Other	Any other enrollment pattern.

Carnegie classification **CARNEGIE**

Carnegie classification code for student's institution.

Research Universities I	These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They award 50 or more doctoral degrees each year. In addition, they receive $40 million or more annually in federal support.
Research Universities II	These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They award 50 or more doctoral degrees each year and receive $15.5 to $40 million in federal support annually.
Doctoral Universities I	These institutions offer a full range of baccalaureate programs and are committed to graduate education through the doctorate. They award at least 40 doctoral degrees in 5 or more disciplines annually.
Doctoral Universities II	These institutions offer a full range of baccalaureate programs and are committed to graduate education through the doctorate. They award at least 10 doctoral degrees in 3 or more disciplines annually, or 20 or more doctoral degrees in one or more disciplines.
Comprehensive I	These institutions offer a full range of baccalaureate programs and are committed to graduate education through the master's degree. They award 40 or more master's degrees annually in three or more disciplines.
Comprehensive II	These institutions offer a full range of baccalaureate programs and are committed to graduate education through the master's degree. They award 20 or more master's degrees annually in one or more disciplines.
Liberal Arts Colleges I	These institutions are primarily undergraduate schools with major emphasis on baccalaureate degree programs. They award 40 percent or more of their baccalaureate degrees in liberal arts fields and are restrictive in admissions.
Liberal Arts Colleges II	These institutions are primarily undergraduate schools with major emphasis on baccalaureate degree programs. They award less than 40 percent of their baccalaureate degrees in liberal arts fields or are less restrictive in admissions.

Number of community service or volunteer activities participated in **COMMNUM**

Indicates the number of community service or volunteer activities the student reported participating in. One of a series of variables examining the types of community service the student reported participating in during 1995-96. Applies to telephone respondents. The question was worded as follows: Did you do any community service or volunteer work during the past year, other than court-ordered service? What did you do? (What was the community service work?)

Types of community service include: worked with kids as a coach/scouting, volunteered at hospital, nursing home, group home, volunteered at an adult literacy project, worked with kids as tutor/mentor, volunteered for neighborhood improvement/cleanup projects, worked at a telephone crisis center, raised money for non-political purpose, raised money or volunteered for political campaign, participated in other type of community service, worked at a shelter/soup kitchen.

None
One
Two or more

Institutional control **CONTROL**

Indicates the control of the NPSAS institution where the student was sampled.

Public
Private not-for-profit
Private for-profit

Cultural activities **CULTUR**

This variable indicates the student's response to whether he or she was satisfied with the cultural activities at the institution.

Satisfied with cultural activities
Not satisfied with cultural activities

Degree program **DEGFIRST**

Degree program during the first term at the NPSAS institution.

Certificate or award
Associate's degree
Bachelor's degree
Undergraduate, non degree program

Delayed enrollment **DELAYED**

Indicates whether the student delayed entry by one or more years into postsecondary education for students with high school diplomas. Assumed high school graduation takes place in May or June. If the student entered postsecondary education in the summer or fall subsequent to high school graduation (in the same calendar year) then student is not considered delayed. Students with no high school diploma or General Educational Development (GED) or certificate of completion are considered to have delayed.

Did not delay
Delayed

Dependency status **DEPEND**

Student's dependency status.

Dependent — Students were financially dependent if they did not meet any of the criteria for independence (see below).

Independent — A student was considered independent by meeting one of the following criteria:

- Was 24 or older as of 12/31/95.
- Was a veteran.
- Was an orphan or ward of the court.
- Had legal dependents, other than spouse.
- Was married, and not claimed by parents on 1995 tax returns.
- Was a graduate student and not claimed as a dependent by parents on 1995 tax return.

Employer aid **EMPLYAMT**

Total amount of employer aid the student received. Employer aid is aid received from the business, corporation, institution, or individual by whom the student is employed. Includes tuition waivers for employees of postsecondary institutions and their dependents. The percentage of students with employer aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received employer aid.

Did receive employer aid
Did not receive employer aid

Enrollment **ENRLSIZE**

This variable indicates the enrollment at the NPSAS institution during 1995-96. This variable is the sum of the number of undergraduate, graduate, and first professional students.

Less than 1,000
1,000-2,499
2,500-4,999
5,000-7,499
7,500-9,999
10,000 or more

Friends or spouse attend institution **FRIENDAT**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because friends or spouse attend the institution. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Friends or spouse attending was a reason for attendance
Friends or spouse attending was not a reason for attendance

First-time beginner 1995-96 **FTBTYPE**

This variable indicates whether the student was a first-time beginner in 1995-96.

First-time beginner
Not a first-time beginner

Gender of student **GENDER**

Male
Female

Grade point average **GPA2**

Student's grade point average during 1995. The grade point average format used by each institution was identified and converted to the 0.0-4.0 scale.

Average hours worked per week while enrolled **HRSWORK**

Indicates the average hours the student worked per week while enrolled during 1995-96. This variable is based on the student's report of the average hours worked per week while enrolled during 1995-96. Students with zero jobs during 1995-96 were recoded to 0 on HRSWORK. Average hours greater than 60 were recoded to 60.

Did not work
Worked 1-14 hours or less while enrolled
Worked 15-29 hours while enrolled
Worked 30 or more hours while enrolled

High school degree or equivalent **HSDEG**

Indicates type of high school degree reported by sample institution. If not available, student-reported data were used.

High school diploma
General Education Development (GED) certificate or other equivalent
Certificate of high school completion
No high school degree or certificate

Income and dependency level **INCOME**

Income level and dependency status for the student. Parents' or guardians' income is the income source for dependent students; the source of independent students' income combines their own earnings and those of their spouse, if married.

Dependent student:

Less than $20,000	Income of less than $20,000 in 1994.
$20,000 to 39,999	Income between $20,000 and $39,999 in 1994.
$40,000 to 59,999	Income between $40,000 and $59,999 in 1994.
$60,000 to 79,999	Income between $60,000 and $79,999 in 1994.
$80,000 or more	Income of $80,000 or higher in 1994.

Independent student:

Less than $5,000	Income of less than $5,000 in 1994.
$5,000 to 9,999	Income between $5,000 and $9,999 in 1994.
$10,000 to 19,999	Income between $10,000 and $19,999 in 1994.
$20,000 or more	Income of $20,000 or higher in 1994.

Other reputation reason **INFLUNCE**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because of other reputation reasons. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Other reputation reasons were reasons for attendance
Other reputation reasons were not reasons for attendance

Institutional aid **INSTAMT**

Indicates the total amount of institutional aid the student received. Institutional aid includes grants and loans from the institution attended, institution-sponsored work-study, and all other institutional aid, including research and teaching assistantships. Institutional aid also includes assistantships funded by federal research grants. The percentage of students with institutional aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received institutional aid.

Did receive institutional aid
Did not receive institutional aid

Institution level 1995-96 **LEVEL**

This variable indicates the level of the NPSAS institution, where the student was sampled. This is not necessarily where the student received aid.

4-year
Less than 4-year

Could live at home if attended **LIVEHOME**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because the student could live at home. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Could live at home was a reason for attendance
Could live at home was not a reason for attendance

Student housing status, 1995-96 **LOCALRES**

Indicates housing status as reported either by the NPSAS institution or the student.

On-campus
Off-campus
With parents or relatives

Undergraduate field of study **MAJORS3**

This variable indicates the student's major/field of study at the NPSAS institution during 1995-96. The major/field of study was coded into one of the following twelve groups: humanities, social/behavioral sciences, life sciences, physical sciences, mathematics, computer/information science, engineering, education, business/management, health, vocational/technical, other technical/professional.

Humanities, social behavioral, life sciences
Physical sciences, engineering, computer science, mathematics
Education
Business, management
Health, other

Received more financial aid **MOREAID**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because he or she received more financial aid. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Received more financial aid was a reason for attendance
Received more financial aid was not a reason for attendance

Number of dependents **NDEPEND**

For independent students, the number of the student's non-spouse dependents. Refers to student's own family, rather than parent's family, regardless of whether the student is dependent or independent. Does not include spouse or student.

Student had one or more dependents
Student did not have dependents

Other source of aid (including VA/DOD) **OTHERSCR**

For students who received aid, total aid from sources that could not be classified as federal, state, or institutional. Includes employer aid, veteran's benefits, vocational rehabilitation, and JTPA program funds. The percentage of students with other aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received aid from these sources.

Did receive other source
Did not receive other source

First generation student **PAREDUC**

The highest level of education completed by the parent with the highest education. This was used to determine whether the student was a first generation student.

Student was first generation: Parent with highest education had less than a high school education, or a high school diploma.

Student was not first generation: Parent with highest education had any one of the following as highest degree:

- less than one year occupational/trade/technical school
- one-year, but less than two years occupational/trade/technical school
- two or more years of occupational/trade/technical school
- less than two years of college
- two or more years of college including AA
- bachelor's degree (4-5 years)
- master's degree or equivalent
- first-professional degree
- doctorate (Ph.D., Ed.D.).

Parent(s) want student to attend **PARENT**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because the parents wanted the student to attended the institution. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Parent(s) wanting student to attend the institution was a reason for attendance
Parent(s) wanting student to attend the institution was not a reason for attendance

Parent(s) attended the institution **PARNATT**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because the student's parent(s) attended the institution. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Parent(s) attended the institution was a reason for attendance
Parent(s) attended the institution was not a reason for attendance

Parents helped with direct contribution 1995-96 **PARPDIR**

Indicates whether parents reported making a direct contribution to the institution to pay for tuition, housing, meals, or books. If not available, student's report of direct payment for tuition, room & board, or books was used.

Student did receive direct contribution from parent
Student did not receive direct contribution from parent

Income percentile rank, 1994 (all students) **PCTALL2**

This variable indicates income percentiles for all students. Equal to the proportion of the sample who had an income lower than that recorded for the student in question. The percentile is calculated separately for dependent and independent students; thus, each ranking compares a student only to other students of the same dependency status. If a student is dependent, the parents' income is used; if the student is independent, the student's own income is used.

Institution job placement rate **PLACEMNT**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because of the institution's job placement rate. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Institution's job placement rate was a reason for attendance
Institution's job placement rate was not a reason for attendance

Participation in political activities, 1995-96 **POLACT**

Indicates whether student reported participating in political meetings/rallies/dinners or writing letters to public officials to express opinions. The question was worded as follows: In the last two years, did you...Go to political meetings, rallies, or dinners (or things like that)? (Campus elections were not counted). Write letters to any public official to express your opinion?

Did participate in political activities
Did not participate in political activities

Comparative tuition level — **PRESTIG2**

This variable groups undergraduates into three distinct categories based on sticker price and Carnegie classification of the institution. This variable is created only for undergraduates who attended 4-year institutions and is defined as follows:

Undergraduates with sticker prices $12,000 or more

- Undergraduates with higher sticker prices — Undergraduates with sticker prices of $12,000 or more in the 1995-96 academic year, regardless of institutional control or Carnegie classification.

Sticker prices below $12,000

- Undergraduates in public research universities — Undergraduates with sticker prices below $12,000 in public 4-year institutions with Carnegie classifications of Research Universities I and Research Universities II.
- Undergraduates in other 4-year institutions — Undergraduates with sticker prices below $12,000 enrolled in all other 4-year institutions.

Faculty reputation — **PROFESOR**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because of faculty reputation. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Faculty reputation was a reason for attendance
Faculty reputation was not a reason for attendance

Race/ethnicity of student — **RACE**

American Indian/Alaskan Native	A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.
Asian/Pacific Islander	A person having origins in any of the Asian or Pacific Islander original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or Pacific Islands. This includes people from China, Japan, Korea, the Philippine Islands, Samoa, India and Vietnam.
Black, non-Hispanic	A person having origins in any of the black racial groups of Africa, and not of Hispanic origin.
Hispanic	A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
White, non-Hispanic	A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (except those of Hispanic origin).
Other	A person not in one of the above categories.

Institution has good reputation **REPUTATN**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because of the institution's reputation. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Institution's reputation was a reason for attendance
Institution's reputation was not a reason for attendance

Number of risk factors **RISKINDX**

This variable represents an index of risk from 0 to 7 related to 7 characteristics known to adversely affect persistence and attainment. Characteristics include delayed enrollment, no high school diploma including GED recipients, part-time enrollment, financial independence, having dependents other than spouse, single parent status, and working full-time while enrolled. Information on student employment is only available for those interviewed. Note: If 3 or more indicators were missing, this variable was set to missing.

No risk factors
One to three risk factors
Four or more risk factors

Student attended institution in state of legal residence **SAMESTAT**

Indicates whether the student attended school in the same state (in-state) as his/her state of legal residence.

Student attended institution in-state
Student attended institution out-of-state

Highest level of education ever expected to complete **SBHIGHED**

This variable indicates the student's response to the question, what is the highest level of education you ever expect to complete? This variable applies to telephone respondents.

Less than bachelor's degree
Bachelor's degree
Master's degree or post-baccalaureate program
Advanced degree-doctoral or first-professional

Institution close to home **SCHCLOSE**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because the institution was close to home. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Institution close to home was a reason for attendance
Institution close to home was not a reason for attendance

Shorter time to finish **SHORTER**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because of a shorter time to finish. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Shorter time to finish was a reason for attendance
Shorter time to finish was not a reason for attendance

Becoming an authority in a field **SIAUTH**

This variable indicates the student's response to whether becoming an authority in a field was an important personal goal.

Each first-time beginner was asked the question as follows: Are the following personal goals very important to you?

- Becoming an authority in a field.
- Influencing the political structure.
- Being very well off financially.
- Becoming successful in your own business.
- Being successful in a particular career.
- Being a leader in the community.
- Living close to your parents and relatives.
- Getting away from the area where you were raised.
- Having leisure time to enjoy personal interests.
- Raising a family.
- Being able to give your children better opportunities than you had.

Becoming an authority in a field was an important personal goal
Becoming an authority in a field was not an important personal goal

Leaving home **SIAWAY**

This variable indicates the student's response to whether he or she attended the institution because of a long-term goal to leave home.

Leaving home reason for attendance
Leaving home not reason for attendance

Offer better opportunities to children **SIBTROPP**

This variable indicates the student's response to whether he or she attended the institution because of a long-term goal to offer better opportunities to children.

Chances for better opportunities to children for attendance
Chances for better opportunities to children not reason for attendance

Succeed in own business **SIBUSIN**

This variable indicates the student's response to whether succeeding in his or her own business was an important personal goal. See SIAUTH for the complete survey question.

Succeeding in my own business was an important personal goal
Succeeding in my own business was not an important personal goal

Class size **SICLSIZE**

This variable indicates the student's response to whether he or she was satisfied with the class sizes at the institution.

Satisfied with class size
Not satisfied with class size

Cost of attendance **SICOST**

This variable indicates the student's response to whether he or she was satisfied with the institution's cost.

Satisfied with institution's cost
Not satisfied with institution's cost

Course availability **SICOURS**

This variable indicates the student's response to whether he or she was satisfied with the course availability at the institution.

Satisfied with course availability
Not satisfied with course availability

Raise a family **SIFAMILY**

This variable indicates the student's response to whether raising a family was an important personal goal. See SIAUTH for the complete survey question.

Raising a family was an important personal goal
Raising a family was not an important personal goal

Financial wealth **SIFINC**

This variable indicates the student's response to whether he or she attended the institution because of a long-term goal to be well off financially.

Financial wealth reason for attendance
Financial wealth not reason for attendance

Influence political structure **SIINFL**

This variable indicates the student's response to whether influencing political structure was an important personal goal. See SIAUTH for the complete survey question.

Influencing political structure was an important personal goal
Influencing political structure was not an important personal goal

Be a leader in the community **SILEAD**

This variable indicates the student's response to whether being a leader in the community was an important personal goal. See SIAUTH for the complete survey question.

Being a leader in the community was an important personal goal
Being a leader in the community was not an important personal goal

Have leisure time **SILEISR**

This variable indicates the student's response to whether having leisure time was an important personal goal. See SIAUTH for the complete survey question.

Having leisure time was an important personal goal
Having leisure time was not an important personal goal

Single parent, independent student **SINGLPAR**

Identifies independent students who were single parents. Students were considered to be single parents if they had dependents, and were not married. Because the number of dependents does not distinguish between dependent children and other dependents such as parents or relatives, single parent is best interpreted as single caretaker.

Student was a single parent
Student was not a single parent

Prestige of school **SIPRSTG**

This variable indicates the student's response to whether he or she was satisfied with the institution's prestige.

Satisfied with institution's prestige
Not satisfied with institution's prestige

Have social contact with faculty **SISOCIAL**

This variable indicates the student response to the question, please tell me how often you participated in the following activity: Have social contact with faculty?

Never
Sometimes
Often

Social life **SISOCLIF**

This variable indicates the student's response to whether he or she was satisfied with the social life at the institution.

Satisfied with social life
Not satisfied with social life

SISUCCAR

Succeed in career

This variable indicates the student's response to whether succeeding in his or her career was an important personal goal. See SIAUTH for the complete survey question.

Succeeding in my career was an important personal goal
Succeeding in my career was not an important personal goal

SITEACH

Instructors' ability to teach

This variable indicates the student's response to whether he or she was satisfied with the institution's instructors' ability to teach.

Satisfied with instructors' ability to teach
Not satisfied with instructors' ability to teach

SIVARSTY

Participated in varsity sports

This variable indicates the student response to the question, please tell me how often you participated in the following activity: Participated in varsity sports?

Never
Sometimes
Often

SMARITAL

Marital status

The student's marital status on the date the student applied for financial aid (based on the FAFSA), or if the student did not apply for financial aid, marital status as reported by the institution.

Not married
Married
Separated

SPORTS

Sports and recreational activities

This variable indicates the student's response to whether he or she was satisfied with the sports and recreational activities at the institution.

Satisfied with sports and recreational activities
Not satisfied with sports and recreational activities

Will vote in '96 presidential election **SQVOTE96**

This variable indicates where the student reported that he or she would, or did, vote in 1996 presidential election. Applies to telephone respondents who were U.S. citizens.

Will vote in '96 presidential election
Will not vote in '96 presidential election

State aid **STATEAMT**

Indicates the total amount of state aid received. State aid includes state grants, loans, state-sponsored work-study, and all other state financial aid. The percentage of students who received state aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received state aid.

Did receive state aid
Did not receive state aid

Liked the campus **SURROUND**

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because he or she liked the campus. This variable applies to telephone respondents.

Other potential reasons include the following:

Location-related reasons:	Close to home
	Close to job
	Could live at home
	Other location reason
	Liked the campus
Reputation/school-related reasons:	Facilities/equipment
	School had a good reputation
	Job placement
	Faculty reputation
	Other reputation-related reason
Cost-related reasons:	Tuition was low
	Other living costs were less
	Got more financial aid
	Shorter time to finish
	Other cost-related reason

Influence-related reasons:
- Friends/spouse attended the school
- Parent(s) wanted student to attend
- Parent(s) attended the school
- Teacher/guidance counselor recommended
- Other influence factors

Campus was a reason for attendance
Campus was not a reason for attendance

Teacher or guidance counselor recommended — TEACHER

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because a teacher or guidance counselor recommended the institution. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Teacher or guidance counselor recommended was a reason for attendance
Teacher or guidance counselor recommended was not a reason for attendance

Scholastic Aptitude Test (SAT) score, combined verbal and mathematics — TESATCRE

The sum of reported SAT verbal and math scores. Constructed from agency-reported, institution-reported, or student-reported SAT scores in the following order of precedence: 1) agency-reported (ETS) SAT verbal and math scores; 2) Institution-reported SAT verbal and math scores; 3) Student-reported SAT verbal and math scores. This variable applies to cases having any reported SAT verbal and math scores.

Less than 1,000
1,000-1,299
1,300-1,600

Federal aid (except VA/DOD) — TFEDAID

The total amount of federal financial aid, including loans, grants, work-study, and all other federal aid the student received, excluding VA/DOD aid. The percentage of students who received any federal aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received federal aid.

Did receive federal aid
Did not receive federal aid

Total aid TOTAID

The total amount of financial aid received from all sources in 1995-96, including federal, state, institution, and other sources received by the student. The percentage of students who received any financial aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received any financial aid.

Did receive aid
Did not receive aid

Grant TOTGRT

The total amount of all grants and scholarships, federal, institutional and other received by the student. Grants are a type of student financial aid that does not require repayment or employment. Grants include scholarships and fellowships. Tuition waivers and employer aid are considered grant aid. The percentage of students with grants is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received grants.

Did receive grant aid
Did not receive grant aid

Loan (except PLUS) TOTLOAN

Indicates the total amount of loans the student received, regardless of the source. Loans are a type of student financial aid that advance funds and are evidenced by a promissory requiring the recipient to repay the specified amounts under prescribed conditions. The percentage of students with loans is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received loans.

Did receive loan
Did not receive loan

Other type of aid (including assistantship and PLUS) TOTOTHR

Indicates the total amount of aid received that was not classified as grants, loans, or work-study. It also includes teaching and research assistantships. This is the sum of other federal amounts, other state amounts and other institutional amounts. The percentage of students with other type of aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received aid from these sources.

Did receive other type of aid
Did not receive other type of aid

Work-study TOTWKST

Indicates the total amount of all work-study awards received. It is the sum of federal work-study amount, state work-study amount, institutional work-study amount and other unclassified work-study amount. Total work-study is one component of total amount of all aid, along with total grant amount, total loan amount, and total other amount. The percentage of students with work-study aid is the percentage with positive amounts recorded for this variable. The average amount received is the average of all students who received work-study aid.

Did receive work-study
Did not receive work-study

Sticker price TUITION

Sticker price of the student for the terms attended. If tuition amounts were not reported, they were estimated based on the average per credit or per term charges for other students at the institution according to their class level, degree program and attendance status.

Low tuition TUITLESS

This is one of a series of variables indicating student-reported reasons for choosing to attend the NPSAS institution. This variable indicates whether the student reported attending the NPSAS institution because the tuition was low. See variable SURROUND, or liked the campus, for other potential reasons the student could respond to why he or she chose the institution. This variable applies to telephone respondents.

Low tuition was a reason for attendance
Low tuition was not a reason for attendance

APPENDIX B: TECHNICAL NOTES

The 1995-96 National Postsecondary Student Aid Study (NPSAS:96)

The 1995-96 National Postsecondary Student Aid Study (NPSAS:96) is a comprehensive nationwide study conducted by the Department of Education's National Center for Education Statistics (NCES) to determine how students and their families pay for postsecondary education. It also describes demographic and other characteristics of students enrolled. The study is based on a nationally representative sample of approximately 41,400 undergraduates (including 27,000 student interviews) enrolled in more than 830 postsecondary education institutions. Students attending all types and levels of institutions are represented in the sample, including public and private institutions and less-than-2-year institutions, 2-year institutions, and 4-year colleges and universities. The weighted effective response rate for the telephone interviews was 76.2 percent. The study is designed to address the policy questions resulting from the rapid growth of financial aid programs, and the succession of changes in financial aid program policies since 1986. The first NPSAS study was conducted in 1986-87, then again in 1989-90, and 1992-93.[1]

Accuracy of Estimates

The statistics in this report are estimates derived from a sample. Two broad categories of error occur in such estimates: sampling and nonsampling errors. Sampling errors occur because observations are made only on samples of students, not on entire populations. Nonsampling errors occur not only in sample surveys, but also in complete censuses of entire populations. Nonsampling errors can be attributed to a number of sources: inability to obtain complete information about all students in all institutions in the sample (some students or institutions refused to participate, or students participated but answered only certain items); ambiguous definitions; differences in interpreting questions; inability or unwillingness to give correct information; mistakes in recording or coding data; and other errors of collecting, processing, sampling, and imputing missing data.

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[1]For more information on the NPSAS survey, consult U.S. Department of Education, National Center for Education Statistics, *Methodology Report for the 1995-96 National Postsecondary Student Aid Study* (NCES 98-0783) (Washington, D.C.: 1998).

DATA ANALYSIS SYSTEM

The estimates presented in this report were produced using the NPSAS:96 Data Analysis Systems (DAS). The DAS software makes it possible for users to specify and generate their own tables from the NPSAS:96 data. With the DAS, users can replicate or expand upon the tables presented in this report. In addition to the table estimates, the DAS calculates proper standard errors[2] and weighted sample sizes for these estimates. For example, table B1 contains standard errors that correspond to table 5, and was generated by the DAS. If the number of valid cases is too small to produce a reliable estimate (less than 30 cases), the DAS prints the message "low-N" instead of the estimate.

Table B1—Standard errors for table 5: Average amount of aid received by full-time, first-year undergraduates in 4-year institutions according to type or source of aid, and average sticker price, by sticker price and Carnegie classification: 1995-96

	Total aid amount	State aid amount	Institutional aid amount	Federal aid amount[1]	Grant aid amount	Loan amount[2]	Sticker price	Non-tuition costs[3]
Total	178.6	67.1	190.6	93.9	152.1	39.9	224.6	72.8
Sticker price and Carnegie classification[3]								
Undergraduates with higher sticker prices	365.2	178.7	356.5	179.7	345.1	89.3	257.5	191.9
Undergraduates in public research universities with sticker prices below $12,000	231.3	158.9	174.0	169.6	179.9	67.9	153.4	120.0
Undergraduates in other 4-year institutions with sticker prices below $12,000	169.4	65.6	136.4	117.8	114.0	48.9	178.2	83.4

[1]Indicates the total amount of federal financial aid, excluding Veterans Administration/Department of Defense (VA/DOD).
[2]Indicates the total amount of all loans (federal, state, institutional, and private sector) except PLUS. PLUS loans are unsubsidized variable-interest rate loans awarded to parents of dependent students who are able to meet criteria for credit worthiness.
[3]The sticker price and Carnegie classification variable groups undergraduates attending 4-year institutions into one of three unique categories. First, "undergraduates with higher sticker prices" are full-time, first-year undergraduates who faced at least $12,000 in tuition and required fees before any tuition remission, discounts, or financial aid award in the 1995-96 academic year, regardless of institution control or Carnegie classification. Second, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending public universities with Carnegie classification of Research I or II, are the "undergraduates in public research universities." Third, undergraduates with sticker prices below $12,000 in the 1995-96 academic year attending all other institutions are the "undergraduates in other 4-year institutions."

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995-96 National Postsecondary Student Aid Study (NPSAS:96), Undergraduate Data Analysis System.

[2]The NPSAS:96 sample is not a simple random sample and, therefore, simple random sample techniques for estimating sampling error cannot be applied to these data. The DAS takes into account the complexity of the sampling procedures and calculates standard errors appropriate for such samples. The method for computing sampling errors used by the DAS involves approximating the estimator by the linear terms of a Taylor series expansion. The procedure is typically referred to as the Taylor series method.

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In addition to tables, the DAS will also produce a correlation matrix of selected variables to be used for linear regression models. Included in the output with the correlation matrix are the design effects (DEFTs) for each variable in the matrix. Since statistical procedures generally compute regression coefficients based on simple random sample assumptions, the standard errors must be adjusted with the design effects to take into account the NPSAS:96 stratified sampling method. (See discussion under "Statistical Procedures" below for the adjustment procedure.)

The DAS can be accessed electronically at www.PEDAR-DAS.org. For more information about the NPSAS:96 Data Analysis System contact:

Aurora D'Amico
NCES Postsecondary and Educational Outcomes Longitudinal Studies
1990 K Street, NW
Washington, DC 20006
(202) 502-7334
Internet address: Adamico@ed.gov

STATISTICAL PROCEDURES

The descriptive comparisons were tested in this report using Student's *t* statistic. Differences between estimates are tested against the probability of a Type I error, or significance level. The significance levels were determined by calculating the Student's *t* values for the differences between each pair of means or proportions and comparing these with published tables of significance levels for two-tailed hypothesis testing.

Student's *t* values may be computed to test the difference between estimates with the following formula:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}} \qquad (1)$$

where E_1 and E_2 are the estimates to be compared and se_1 and se_2 are their corresponding standard errors. Note that this formula is valid only for independent estimates. When the estimates were not independent (for example, when comparing the percentages across a percentage distribution), a covariance term was added to the denominator of the *t*-test formula.

There are hazards in reporting statistical tests for each comparison. First, comparisons based on large *t* statistics may appear to merit special attention. This can be misleading, since

the magnitude of the *t* statistic is related not only to the observed differences in means or percentages but also to the number of students in the specific categories used for comparison. Hence, a small difference compared across a large number of students would produce a large *t* statistic.

A second hazard in reporting statistical tests for each comparison occurs when making multiple comparisons among categories of an independent variable. For example, when making paired comparisons among different levels of income, the probability of a Type I error for these comparisons taken as a group is larger than the probability for a single comparison. When more than one difference between groups of related characteristics or "families" is tested for statistical significance, one must apply a standard that assures a level of significance for all of those comparisons taken together.

Comparisons were made in this report only when $p<=.05/k$ for a particular pairwise comparison, where that comparison was one of k tests within a family. This guarantees both that the individual comparison would have $p<=.05$ and that for k comparisons within a family of possible comparisons, the significance level for all the comparisons will sum to $p<=.05$.[3]

For example, in a comparison of the percentages of males and females who enrolled in postsecondary education only one comparison is possible (males versus females). In this family, $k=1$, and the comparison can be evaluated without adjusting the significance level. When students are divided into five racial-ethnic groups and all possible comparisons are made, then $k=10$ and the significance level of the each test must be $p<=.05/10$, or $p<=.005$. The formula for calculating family size (k) is as follows:

$$k = [\, j * (\, j - 1\,)\,] / 2 \qquad (2)$$

where j is the number of categories for the variable being tested. In the case of race-ethnicity, there are five racial-ethnic groups (American Indian/Alaskan Native, Asian/Pacific Islander, black, non-Hispanic, Hispanic, and white, non-Hispanic), so substituting 5 for j in equation 2,

$$k = [\, (\, 5\,)(\, 5 - 1\,)\,] / 2 = 10 \qquad (3)$$

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[3]The standard that $p<=.05/k$ for each comparison is more stringent than the criterion that the significance level of the comparisons should sum to $p<=.05$. For tables showing the t statistics required to ensure that $p<=.05/k$ for a particular family size and degrees of freedom, see Olive Jean Dunn, "Multiple Comparisons Among Means," *Journal of the American Statistical Association* 56: 52-64.

ADJUSTMENT OF MEANS TO CONTROL FOR BACKGROUND VARIATION

Tabular results are limited by sample size when attempting to control for additional factors that may account for the variation observed between two variables. For example, when examining the percentages of those who completed a degree, it is impossible to know to what extent the observed variation is due to low-income status differences and to what extent it is due to differences in other factors related to income, such as type of institution attended, parents' education, and so on. However, if a nested table were produced showing income within type of institution and within parent's education, the cell sizes would be too small to identify the patterns. When the sample size becomes too small to support controls for another level of variation, one must use other methods to take such variation into account.

To overcome this difficulty, multiple linear regression was used to obtain means that were adjusted for covariation among a list of control variables.[4] Adjusted means for subgroups were obtained by regressing the dependent variable on a set of descriptive variables such as gender, race-ethnicity, etc. Substituting ones or zeros for the subgroup characteristic(s) of interest and the mean proportions for the other variables results in an estimate of the adjusted proportion for the specified subgroup, holding all other variables constant. For example, consider a hypothetical case in which two variables, age and gender, are used to describe an outcome, Y (such as completing a degree). The variables age and gender are recoded into a dummy variable representing age and a dummy variable representing gender:

Age	*A*
24 years or older	1
23 or younger	0
Gender	*G*
Female	1
Male	0

The following regression equation is then estimated from the correlation matrix output from the DAS:

$$Y = a + B_1A + B_2G \qquad (4)$$

[4] For more information about least squares regression, see Michael S. Lewis-Beck, *Applied Regression: An Introduction*, vol. 22 (Beverly Hills, CA: Sage Publications, Inc., 1980) and William D. Berry and Stanley Feldman, *Multiple Regression in Practice*, vol. 50 (Beverly Hills, CA: Sage Publications, Inc. 1987).

where Y is the adjusted mean (or percentage), a is the intercept from the regression model, β_1 is the regression coefficient of the dummy variable representing age, and β_2 is the regression coefficient representing gender. To estimate the adjusted mean for any subgroup evaluated at the mean of all other variables, one substitutes the appropriate values for that subgroup's dummy variables (1 or 0) and the mean for the dummy variable(s) representing all other subgroups. For example, suppose Y represents degree attainments and is being described by age (A) and gender (G), with means as follows:

Variable	*Mean*
A	0.355
G	0.521

Next, suppose the regression equation results in:

$$Y = 0.15 + (0.17)A + (0.01)G \tag{5}$$

To estimate the adjusted value for older students, one substitutes the appropriate parameter estimates and variable values into equation 5.

Variable	*Parameter*	*Value*
a	0.15	--
A	0.17	1.000
G	0.01	0.521

This results in:

$$Y = 0.15 + (0.17)(1) + (0.01)(0.521) = 0.325 \tag{6}$$

In this case, the adjusted mean for older students is 0.325 and represents the expected chance of the outcome (in this example, attaining a degree) for older students who look like the average student across the other variables (in this example, gender). In other words, the adjusted percentage of older students who attained a degree is 32.5 percent (0.325 x 100 for conversion to a percentage).

One can produce a multivariate model using the DAS, since one of the output options of the DAS is a correlation matrix, computed using pairwise missing values and weighted to

account for sampling design and nonresponse.[5] This matrix can be used by most statistical software packages as the input data for least-squares regression. That is the approach used for this report, with an additional adjustment to incorporate the complex sample design into the statistical significance tests of the parameter estimates (described below). For tabular presentation, parameter estimates and standard errors were multiplied by 100 to match the scale used for reporting unadjusted and adjusted percentages.

Most statistical software packages assume simple random sampling when computing standard errors of parameter estimates. Because of the complex sampling design used for NPSAS, this assumption is incorrect. A better approximation of their standard errors is to multiply each standard error by the average design effect associated with the dependent variable (DEFT),[6] where the DEFT is the ratio of the true standard error to the standard error computed under the assumption of simple random sampling. It is calculated by the DAS and is part of the correlation matrix output file.

[5] Although the DAS simplifies the process of making regression models, it also limits the range of models. Analysts who wish to use other than pairwise treatment of missing values to estimate probit/logit models (which are the most appropriate for models with categorical dependent variables) can apply for a restricted data license from NCES. See John H. Aldrich and Forrest D. Nelson "Linear Probability, Logit and Probit Models," *Quantitative Applications in the Social Sciences*, vol. 45. (Beverly Hills, CA: Sage University Press, 1984).

[6] The adjustment procedure and its limitations are described in C. J. Skinner, D. Hold, and T. M. F. Smith (eds.), *Analysis of Complex Surveys*. (New York: John Wiley & Sons, 1989).